Home Computing WEEKLY

An Argus Specialist Publication

No.35
November 1-7, 1983

38p

FREE COMPETITION

Spectrum Microdrive to be won, plus 100 prizes of New Generation Software

NEW: Top 30 software chart. Plus: Top 10 charts for Commodore 64 VIC-20, ZX81, Spectrum and Dragon

Software reviews for:
Oric, Lynx, Spectrum, Texas, BBC Jupiter Ace, Commodore 64

Great Guy Fawkes program to type into your Spectrum

More programs to type in for:
Oric, Atari, VIC-20, ZX81 and Texas

Taiwanese micro takes on the BBC

A new computer is being designed in Bradford and made in the Midlands...by a giant Taiwanese company.

It is to make its public debut at a show next March, said Kevin Hayes, sales development manager of Tatung (UK).

Although it would be in the upper price range, Mr Hayes said many features usually sold as extras would be built in.

There would be a range of three or four and the base model would offer: a typewriter-style keyboard with cursor keys, 64K of RAM, a single three-inch Hitachi disc drive, colour, 40-column screen – with an option for 80 columns – Microsoft-

continued on page 5

Long wait for Electron

Unless you strike lucky, you'll have to wait weeks for Acorn's new computer, the £199 Electron.

There are eight possible customers for every single machine, and W.H. Smith's merchandise controller Stewart Binnie said: "Our branches are under siege."

Production in Malaysia had not got under way as quickly as hoped, said Robert Blood, for Acorn.

In a message to people waiting,

continued on page 5

NEW FOR BBC 32K
SENTINEL £6·95
AVAILABLE NOW DIRECT FROM P.S.S.
CREDIT CARD SALES TEL (0203) 667556.
CHEQUE OR P.O. TO P.S.S. 452 STONEY STANTON RD. COVENTRY CV6 5DG.

HERE COMES HORACE!

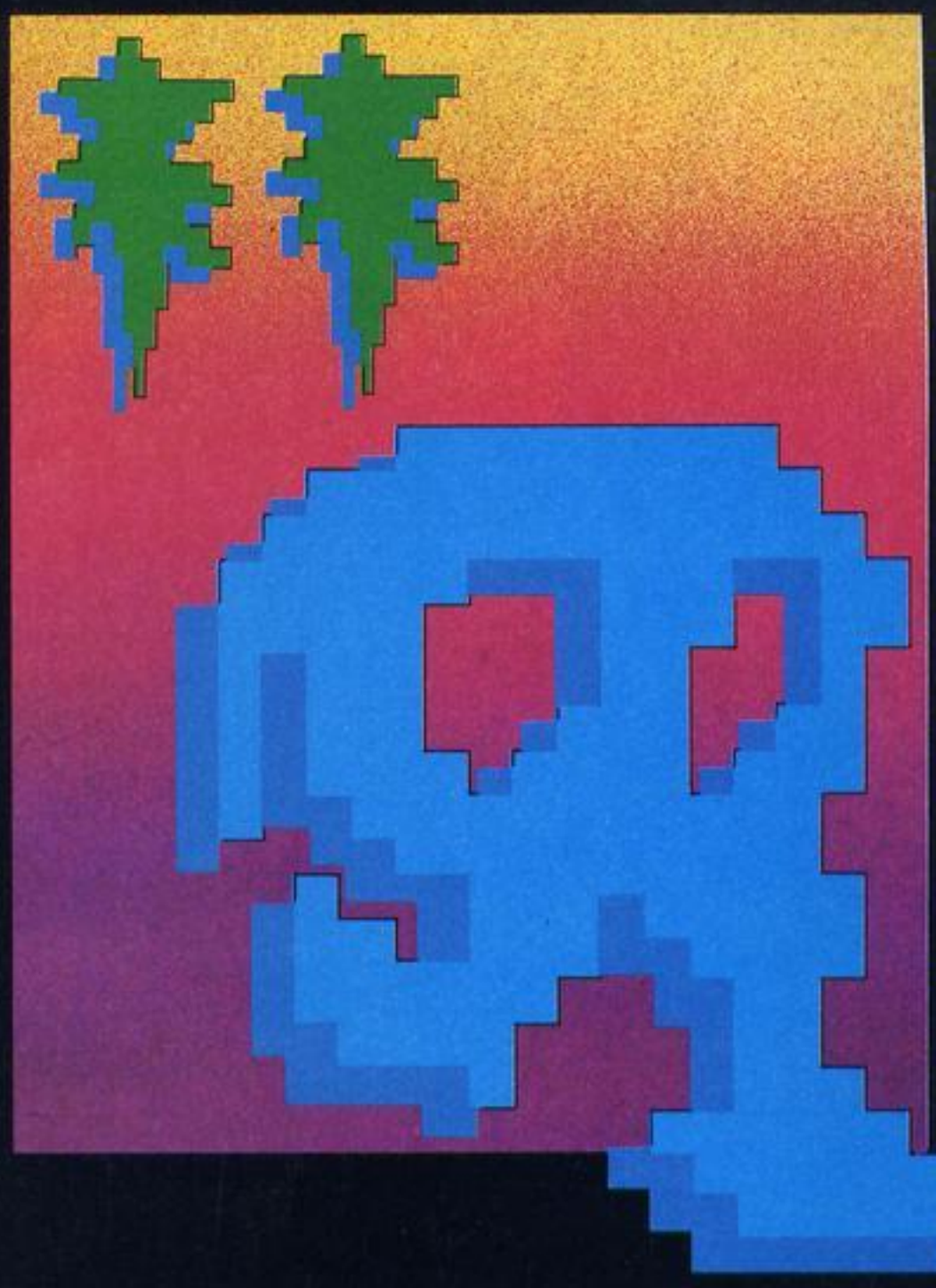
Just when you thought microcomputer games had nothing more to offer, here comes Horace!

It has been said that Horace games are in a class of their own: in fact, Horace is almost a legend.

Horace is a cute, lovable, animated character who races through adventures, creating havoc wherever he goes, and the good news is that Horace games are now available for most microcomputers.

When Horace was first introduced to computer owners in the game "Hungry Horace", he immediately became a cult figure, winning the hearts of thousands of computer owners. Now, you too can enjoy the hair-raising adventures of Horace.

The Horace series of games brings you splendid graphics, addictive games and a lovable mischievous character, for only £5.95 per cassette.



HUNGRY HORACE

The original Horace adventure. Horace creates havoc in the park as he picks the flowers, annoys the guards and steals their lunch.

Patently ridiculous, but great fun.

HORACE GOES SKIING

Our hero attempts winter sports: First of all he must get to the ski shop, then lumbered with a pair of skis, he has to dodge the traffic once again to reach the snow. Skiing is complete with slalom flags, trees and moguls. So watch out, Horace!

HORACE AND THE SPIDERS

Horace's task is to rid the mountain caves of spiders. But before he can do that he must climb the mountain and reach the dreaded spider bridge. To cross it, Horace must swing from spider thread to spider thread! This game is challenging and fun with some amazing animation.

MELBOURNE HOUSE

Melbourne House Publishers

Spectrum

Spectrum version of Horace games are available from selected branches of WH Smith, Boots and Menzies or directly from Sinclair Research Ltd.

Commodore 64

Commodore 64 Hungry Horace	£5.95 ☐
Commodore 64 Horace Goes Skiing	£5.95 ☐

Dragon 32

Dragon 32 Hungry Horace	£5.95 ☐

All prices include VAT where applicable. Please add 80p for post and pack.

I enclose my cheque/money order for £

Please debit my Access Card No. Expiry date

Signature

Name

Address

Postcode

£

£ + p/p .80

Total £

HCW 1/11

Orders to:
Melbourne House
131 Trafalgar Road
Greenwich London SE10

Correspondence to:
Melbourne House
Tring
Hertfordshire

Trade enquires welcome

All Melbourne House cassette software is unconditionally guaranteed against malfunction. Access orders can be telephoned through on our 24 hr ansafone (01) 858 7397.

BBC BEST

NEW CATALOGUE

Send 50p stamp to:
Software Supermarket, 87 Howard's Lane, London SW15 6NU

Home Computing WEEKLY

News 5,6

Software charts, plus our new Top 30 7

Software reviews 9
Motor-vated games for Lynx, BBC, Commodore 64, Ace

Spectrum Guy Fawkes program 10
Your chance to change history

Software reviews 13
Adventures for Dragon, Spectrum, BBC

Oric program 21
Bat your way out of that

U.S. Scene 17

TI-99/4A program 25
Test your aim in the Astro Gallery

Software reviews 21
Utilities for BBC, Spectrum, Commodore 64

VIC-20 program 23
Park safely – then run for your money

1K ZX81 programs 25
Five useful and amusing programs

Software reviews 29
Games for BBC, Jupiter Ace, TI-99/4A, Commodore 64

Atari program 31
Card games for any Atari – and there's more to come

Software reviews 35
Space games for TI-99/4A, BBC, Lynx, Jupiter Ace

Software reviews 37
Get lost with Dragon, Commodore 64, Lynx, Spectrum

Competition 39
A Spectrum Microdrive and 200 games must be won

Letters 42

Profile: dk'tronics 43

Classified ads start on 44

Acting Editor: Paul Liptrot
Assistant Editor: Candice Goodwin
Designer: Bryan Pitchford
Managing Editor: Ron Harris
Advertisement Manager: Coleen Pimm
Assistant Advertisement Manager: Ricky Holloway
Classified Advertising: Debra Stupple
Chief Executive: Jim Connell

Argus Specialist Publications Ltd.
145 Charing Cross Road, London WC2H OEE. 01-437 1002

Home Computing Weekly is published on Tuesdays. Distribution by Argus Press Sales and Distribution Ltd, 12-14 Paul Street, London EC2A 4JS. Printed by Alabaster Passmore & Sons Ltd, of London and Maidstone, Kent. Design and origination by MM Design and Print, 145 Charing Cross Rd., London WC2H OEE

Briefly

Nigel Smith of the Which? Money team wrote Taxcalc, a program which claims to be able to tell most users exactly how much tax they should have paid. Written for the BBC B micro, it is published by the BBC and costs £17.25.
Consumers' Association, Castlemead, Gascoyne Way, Herts SG14 1LH

HMV shops has taken the first step into computer software retailing by opening a software department in its main Oxford Street store. The department will stock 70-80 games titles for the Spectrum, ZX81, VIC-20, Oric, BBC, Atari 400/800 and Dragon, and more titles will be added as they become available. And if they don't have the game you want, they will order it specially for you.
HMV Shop, 363 Oxford Street, London W1

New software house Acme has launched its first three games, all costing £5. Connect Four runs on the Lynx, Practically Impossible is for the Spectrum and Bridgeman is for the VIC-20.
Acme, 49/51 The Albany, Old Hall Street, Liverpool, Merseyside L3 9EJ

Longman Software is following up its first three educational programs with four new titles for the Spectrum and BBC. The Spectrum titles, all at £7.95, are Lunar Letters, Robot Runner, Sum Scruncher and Wild Words, aimed at children of around six. For the BBC, there's Sheepdog, Number Rally, Number Skills 0-20 and Number Skills 0-999, all covering the four to eight age group and costing £9.95.
Longman Software, Longman House, Burnt Mill, Harlow, Essex CM20 2JE

Psion's latest release for the BBC, Saloon Sally, is an action game with a difference. It's got a heroine rather than a hero, and the action is linked to a musical theme. There's an element of strategy, too. Price: £7.95, on sale now in W H Smith.
Psion, 2 Huntsworth Mews, Gloucester Place, London NW1 6DD

BUY THIS SPACE

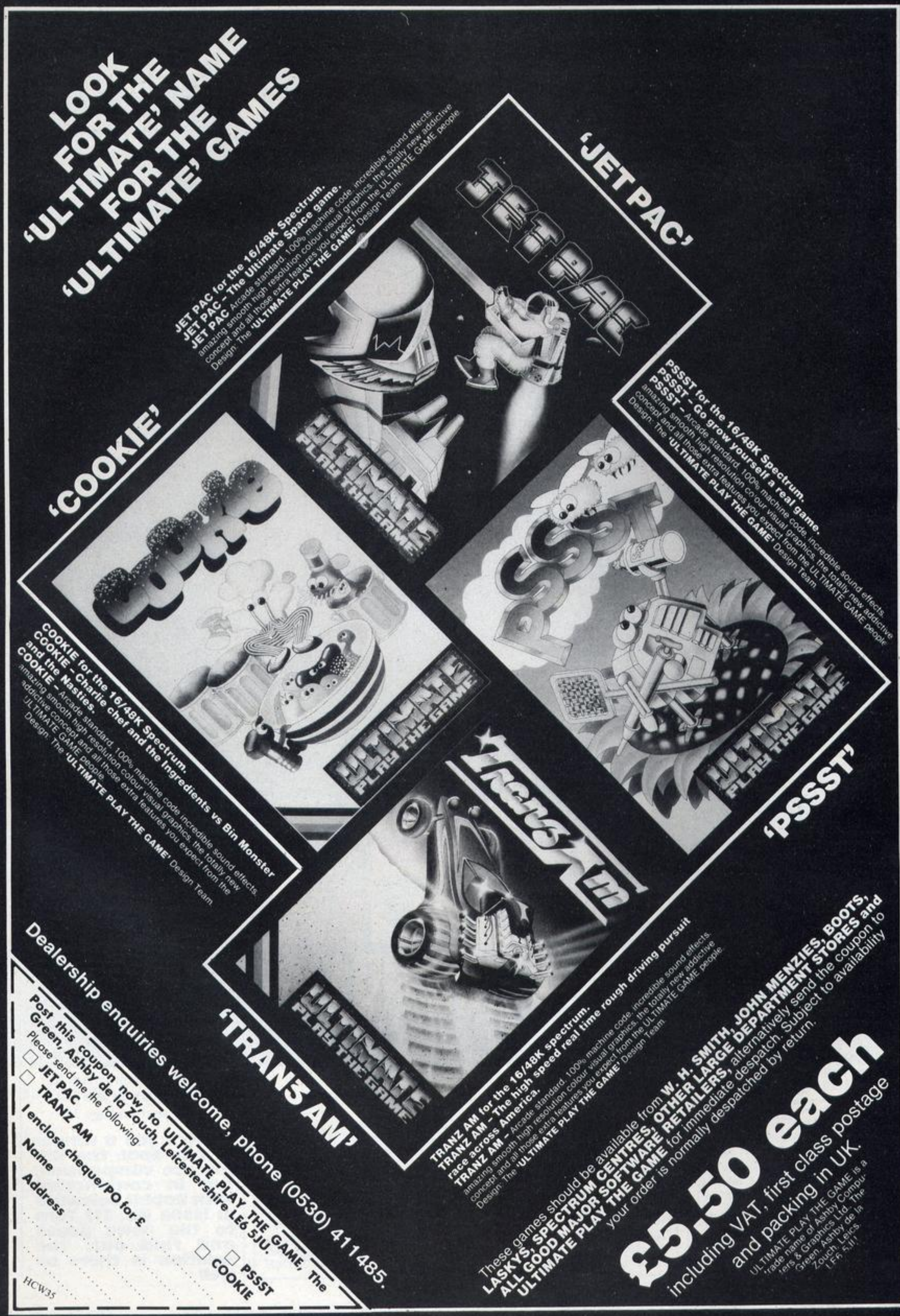
To advertise your latest products!
Ring Coleen or Barry on
01-437 1002 NOW!

There's a Microdrive and some great games to win on page 39

If you own an Atari you'll want to type in the first in our series of card games.
Turn to page 31

Have fun – and be serious, too – with five programs for the ZX81 which fit into just 1K. They start on page 25

• Were you a winner in our Spot the Difference competition, run in conjunction with Rabbit Software in issue No. 31? Turn to the news pages and find out. The solution is there as well


LOOK FOR THE 'ULTIMATE' NAME FOR THE 'ULTIMATE' GAMES
'JET PAC'
JET PAC for the 16/48K Spectrum.
JET PAC - The Ultimate Space game.
JET PAC Arcade standard, 100% machine code, incredible sound effects, amazing smooth high resolution colour visual graphics, the totally new addictive concept and all those extra features you expect from the ULTIMATE GAME people.
Design: The 'ULTIMATE PLAY THE GAME' Design Team.
'COOKIE'
COOKIE for the 16/48K Spectrum.
COOKIE - Charlie chef and the Ingredients vs Bin Monster and the Nasties.
COOKIE - Arcade standard, 100% machine code incredible sound effects, amazing smooth high resolution colour visual graphics, the totally new addictive concept and all those extra features you expect from the ULTIMATE GAME people.
Design: The 'ULTIMATE PLAY THE GAME' Design Team.
'PSSST'
PSSST for the 16/48K Spectrum.
PSSST - Go grow yourself a real game.
PSSST - Arcade standard, 100% machine code, incredible sound effects, amazing smooth high resolution colour visual graphics, the totally new addictive concept and all those extra features you expect from the ULTIMATE GAME people.
Design: The 'ULTIMATE PLAY THE GAME' Design Team.
'TRAN3 AM'
TRANZ AM for the 16/48K spectrum.
TRANZ AM - The high speed real time rough driving pursuit race across America.
TRANZ AM - Arcade standard, 100% machine code, incredible sound effects, amazing smooth high resolution colour visual graphics, the totally new addictive concept and all those extra features you expect from the ULTIMATE GAME people.
Design: The 'ULTIMATE PLAY THE GAME' Design Team.
Dealership enquiries welcome, phone (0530) 411485.
These games should be available from W. H. SMITH, JOHN MENZIES, BOOTS, LASKYS, SPECTRUM CENTRES, OTHER LARGE DEPARTMENT STORES and ALL GOOD MAJOR SOFTWARE RETAILERS, alternatively send the coupon to ULTIMATE PLAY THE GAME for immediate despatch. Subject to availability your order is normally despatched by return.
£5.50 each
including VAT, first class postage and packing in UK.
ULTIMATE PLAY THE GAME is a trade name of Ashby Computers & Graphics Ltd. The Green, Ashby de la Zouch, Leics. LE6 5JU.
Post this coupon now, to ULTIMATE PLAY THE GAME, The Green, Ashby de la Zouch, Leicestershire LE6 5JU.
Please send me the following
☐ JET PAC
☐ TRANZ AM
☐ PSSST
☐ COOKIE
I enclose cheque/PO for £
Name
Address
HCW35

New Micro

From front page

like BASIC, RS-232 and Centronics-type interfaces and a Z80A processor. A range of software would be ready at launch.

Mr Hayes said he saw three main types of buyer:

- Owners of computers like the Spectrum who wanted to move on to a more powerful and sophisticated micro
- Educational
- Small businesses, particularly because of the new computer's operating system which would be similar to CP/M, the industry standard for business micros

Asked about Tatung's chances in the highly competitive computer market, Mr Hayes said: "We have the financial clout behind us which some other companies do not have – and they won't be around in two to three years."

He said Tatung, the largest company in Taiwan, had a $5,000m worldwide turnover. Its range of products included ships to computer terminals for companies like Zenith, IBM and Control Data.

In the electrical goods industry, it is best known in the UK for its purchase in 1981 of Decca's consumer electronics division. The company's Bridgnorth plant now makes 10 per cent of all the country's TVs, according to industry observers.

It also makes a range of VDUs.

Competition for the new computer would come from micros like the BBC model, made by Acorn.

On pricing, Mr Hayes said: "I see prices rise for items like memory while companies are bringing down the retail cost. It seems to me to be a formula for disaster."

The market for computers was growing, he said, adding: "We have a lot of experience in selling in the consumer market – everything from rice cookers to washing machines. So we do not have to buy in these services."

Tatung (UK), Hospital Street, Bridgnorth, Shrops

Electron Wait

From front page

he said: "We would like to offer our sympathy, but for some months you won't be able to walk into a shop and buy one off the shelf."

Mr Binnie said: "We have been through this before with the ZX81 and the Spectrum."

Demand had been particularly high because of the Electron's relationship with the BBC micro. The Electron is often described as a "cut down" BBC computer because the two are so similar.

He expected supplies to improve this month and advised people to check regularly with their nearest branches.

He explained that Smiths did not operate waiting lists because customers would be annoyed at seeing reserved computers on the shelves.

Mr Blood said: "The situation of supply not meeting demand is going to last at least until Christmas. It's going to be very hard to get hold of for some time yet."

The plant in Malaysia was to have been turning out Electrons at 25,000 a month but was not yet up to capacity.

Another plant, in Wales, was due to begin production at the beginning of next year with a 100,000 initial order and a third plant was also planned.

There has, however, been something of a silver lining for Acorn. Customers finding there were no Electrons have been buying £399 BBC micros instead, said Mr Blood.

- Computer sales had increased "quite markedly" in the run-up to Christmas, said Mr Binnie. But, in an increasingly sophisticated market, sales of some models had remained the same. He would not name them, commenting: "I think it's going to be a ruthless Christmas."

W.H. Smith & Son, Strand House, 10 New Fetter Lane, London EC4A 1AD
Acorn Computers, Fulbourn Road, Cherry Hinton, Cambridge CB1 4JN

The COMX 35 – with built-in joystick

COMX comes off the shelves

Sales of the Hong Kong-made COMX 35 computer here have been halted – because more than half did not work.

U.K. distributors Computers For All sent nearly 600 back to the makers.

CFA's joint managing director, Steve Vickers, said: "Every single one was unpacked and switched on for a functional test. We had a 55 per cent failure rate.

"The company was also very poor on support, at supplying things like replacement pcbs and spares.

"We have been in touch with every dealer and returned their machines. We've managed to clean up as best as we can. I believe less than 30 or 40 were sold.

"If they break down we will repair them if we can, or give a full refund."

Mr Vickers said his company took on the sole U.K. distribution rights because the features the computer offered, like low-power CMOS chips – leading to possible use as a portable – ANSI standard BASIC and a good memory, 35K with 32K useable.

He said negotiations with Germaine Video, of Hong Kong, had brought down the retail price to £119.95 for the 70 dealers supplied by CFA.

"All in all it wasn't a bad machine," he said. "I think it's still on sale in other parts of Europe. I estimate we lost about £1,000, without the cost of delivery and so on. But it's the principle that counts."

CFA is a distributor for a number of big-name micros, like Commodore, Sord, Laser 200 and Acorn.

Micros in BHS

British Home Stores has joined other High Street chains offering home computers. And merchandise controller Hugh Clark said: "There's room for us to reach some meaningful sales."

Sinclair, Commodore and Dragon computers, plus software, are now in 21 new BHS electrical departments, alongside goods like TVs, radios and telephones. Two staff from each store had tken a special training course, said Mr Clark.

British Home Stores, 129 Marylebone Rd, London NW1 5QD

Our new charts

This week we start two new software charts – a nationwide Top 30 for all computers and an additional Top 10 from Boots for the Commodore 64.

The Top 30 will be produced fortnightly, at first, by PCS Distribution, based on guidelines from the Computer Trade Association whose legal adviser, Ann Staines, will be making spot checks.

The positions are based on retail sales in individual outlets – excluding chains at present – and software from all sources is included.

The names of the retailers remain confidential and, as an extra safeguard, 25 per cent of the returns are discarded at random.

The Commodore 64 chart is based on sales of software stocked by Boots. We will continue with our weekly charts for the Spectrum, from Smiths, and the VIC-20, ZX81 and Dragon, from Boots.

Clive's plans to live in style

Builders are converting an old warehouse in central London into a luxury home for millionaire computer boss Sir Clive Sinclair.

When finished it will have a basement swimming pool and a roof-level conservatory, with ground, mezzanine, first and second floors in between.

The work is costing Sir Clive £400,000 and he may well then give up his flat in London.

Gutting the building and providing an enlarged basement has meant underpinning neighbouring buildings and strengthening the foundations.

John Parry, general manager of John Willmott Western Building, said: "It's a very challenging contract — the type of work we would usually do for overseas clients. It will be quite a feather in our cap when it's finished."

Sir Clive – living in style

Portable processing

Rotronics' computer case is fitted with foam to hold your computer equipment securely while you're carrying it about.

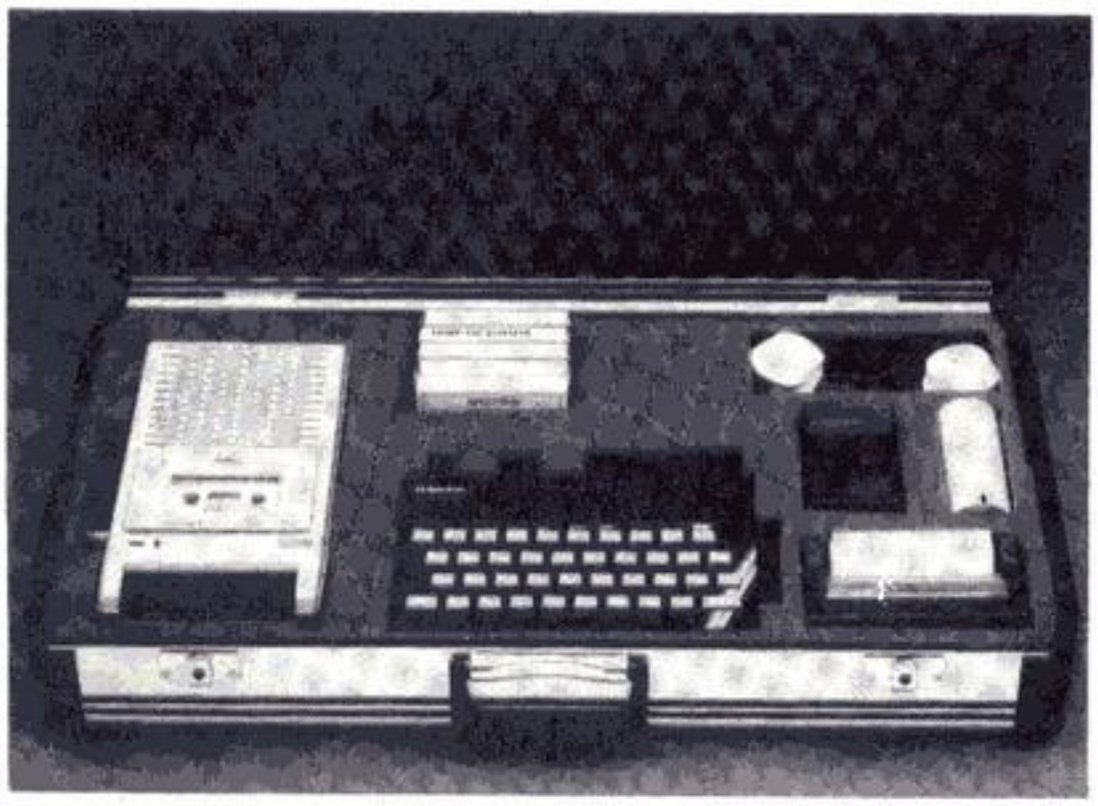
Versions are available for the ZX81 and Spectrum, VIC-20, Commodore 64 and Oric, and there's room for a cassette recorder, printer, printer paper, power supply and cassettes. Computer books can be stored in the lid.

But if you own a different computer, or if you have other equipment you want to store. Rotronics sells blank foam inserts that you can shape to suit your own requirements.

All trailing wires are hidden under the form padding, so all you have to do is plug into the mains and TV and your equipment's ready to use.

The case costs £36.99.

Rotronics, 29 Octagon Parade, High Wycombe, Bucks HP11 2HZ



Computer equipment packed away in a Rotronics case

IBM's home computer: all the 'facts'

IBM was keeping silent, but several observers believed the company's long-awaited home computer was to be announced today (Tuesday).

With no official details available – not even the micro's name – the following is culled from reports here and in America.

There will be two models, both using domestic TVs and the same Intel 8088 processor as IBM's enormously popular Personal Computer.

The base model will have 64K of RAM and use a cassette recorder. Price estimate: $750-$800.

The pricier version, at $1,200-$1,350, will have 128K of RAM and a built-in floppy disc drive.

Both have cartridge slots and, it is said, a cordless typewriter-style keyboard. An infra-red beam will control the main unit, similar to a TV remote control.

IBM is reckoned to have cornered 26 per cent of the US micro market with the IBM PC and 650,000 have been sold worldwide since it was launched in August 1981. And the company could sell about six times as many as it produces.

PCs are also made in the UK, where it is said to be the second most popular business micro.

If the November 1 launch date for the PC Junior – codenamed Peanut — is true, one observer says sales of 80,000-100,000 are on the cards in the US by Christmas.

Outside IBM, nobody knows when it can be expected here. The PC was in the UK within a year of its US launch. But before then some dealers were selling "grey" imports.

IBM United Kingdom, PO Box 41, North Harbour (Baltic House), Portsmouth PO6 3AU

CTA awards

Oscars for software are to be awarded in February, decided by the votes of Computer Trade Association members.

Voting will take place in January for the best home, educational and business programs, an overall program of the year, person of the year and product of the year.

Computer Trade Association, 108 Margaret Street, Coalville, Leics LE6 2LX

Spot the winners

Congratulations to the 25 winners of our spot the difference competition, run in conjunction with Rabbit Software in issue No. 31.

We asked you to study two cartoons and mark the differences and tell us how many there were.

The correct number was 12 and this is how the two cartoons differed, from the top:

- one figure missing from screen
- bowler hat missing
- rabbit ear omitted
- two fewer bullets firing from rabbit's rifle
- bough missing from tree to right of screen
- part of keyboard on left omitted
- one less key on right
- carrots' foliage changed
- can of "Lettuce Bitter" had no hole in top
- two whiskers missing from rabbit in newspaper
- beginning of newspaper article omitted
- figure 20 on packet of "Carrot Fags" missing

We offered prizes of £40-worth of games from Rabbit Software's range to each of the 25 winners and these prizes will arrive from Rabbit within 28 days.

The winners were the first 25 correct entries we opened, regardless of computer owned. They are:

VIC-20 owners: Carl Phillips, of Salford; R. Coppock, Northwich; Christopher Davies, Swansea; Damian Maidment, Sheffield; Andrew Mason, Coventry; Craig Taylor, Bacup; Jason Clive, Belvedere; Timothy Multon, Denham Green; W. Belle, Winson Green; Edward King, Bridgwater; Mark Arnold, Copnor.

Spectrum owners: B. Christie, of Tayside; E. McLean, Edinburgh; S.H. Gilbert, Camborne; Christopher Hall, Belfast; Neil Cantello, Alton; Jonathan Denham, Woodham Ferrers; Mrs K. Salfi, Leeds; Steven Horne, Hull; John Dytrych, Ashington.

Commodore 64 owners: R. Pearson, Kettering; G.D. Clements, Elgin; Michael Payne, Hull; Steven Kirk, Bedlington; Neil Boothman, Manchester.

ASA steps in over micro ads

Computer companies including Acorn and Oric have been criticised by the Advertising Standards Authority for misleading adverts, after members of the public complained.

Acorn had advertised, along with the BBC micro, some peripherals that were not yet available, including Prestel and Teletext adaptors.

To make matters worse, they claimed that using these adaptors to load broadcast software was "another first for the BBC micro", whereas the Research Machines 380Z was actually the first machine to be able to receive telesoftware.

Lastly, Acorn has claimed that over 75% of computers going into schools were BBC micros.

What they did not make clear was that this only referred to primary schools — and even then, only to orders for computers made under the Department of Industry's Micros in Primary Schools scheme.

Oric came under attack for using in one of its ads a quotation from a computer mag. The quotation was accurate — but the magazine had got its facts wrong!

The quote, from a hardware review in Which Micro?, said that "Instead of the Spectrum's 28 look-up single character error reports, the Oric has 18 self-explanatory messages."

But a member of the public pointed out that the look-up error reports were a feature of the ZX81, not the Spectrum.

A computer add-on maker, Solidisk Technology of Southend-on-Sea, was asked to change an ad which stated that its X ROM Card could be used with the Sinclair RAM pack.

When a micro owner from London tried to order the X ROM, they were told that it would cost extra if it was to be used with the Sinclair RAM pack instead of the manufacturer's own — and that it wasn't available anyway.

Finally, a micro enthusiast from Darlington travelled 150 miles to the Scottish Personal Computer World Show in Edinburgh, only to find that the show had been cancelled.

The ASA stepped in, and show organisers Montbuild reimbursed the disappointed enthusiast's petrol costs — plus two complimentary tickets for the next show.

ASA, Brook House, Torrington Place, London WC1E 7HN

25 for the 25th

dk'tronics has brought out a bumper 25 new programs for Christmas — 13 for the Spectrum, four for the BBC micro, five for the Commodore 64, two for the unexpanded VIC-20 and one for the 16K ZX81.

Among them is Slicker, a £6.95 puzzle game available for four computers: Spectrum, VIC-20, Commodore 64 and BBC.

This latest batch means that the company now has a range of 46 titles for five micros.

Top Ten programs for the ZX81

1	Football Manager	Addictive (8)
2	Flight Simulation	Sinclair (1)
3	Espionage Island	Sinclair (3)
4	Space Raiders	Sinclair (2)
5	Scramble	Quicksilva (7)
6	1K Games	Sinclair (4)
7	1K Chess	Sinclair (4)
8	Ship of Doom	Sinclair (9)
9	Defender	Quicksilva (6)
10	Fantasy Games	Sinclair (5)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the VIC-20

1	Gridrunner	Llamasoft (4)
2	Arcadia	Imagine (4)
3	Catcha Snatcha	Imagine (–)
4	Wacky Waiters	Imagine (3)
5	Cosmiads	Bug Byte (–)
6	Bonzo	Audiogenic (–)
7	Skyhawk	Quicksilva (7)
8	Home Office	Audiogenic (–)
9	Anti-Matter Splatter	Rabbit (–)
10	Wizard and the Princess	Melbourne House (–)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the Dragon

1	Nightflight	Salamander (7)
2	Ring of Darkness	Wintersoft (1)
3	Android Attack	Microdeal (8)
4	Cuthbert Goes Walkabout	Microdeal (3)
5	Space War	Microdeal (–)
6	Champions	Peaksoft (5)
7	Mined Out	Quicksilva (6)
8	Dragonfly	Hewson (–)
9	Space Shuttle	Microdeal (4)
10	Franklin's Tomb	Salamander (10)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the Spectrum

1	Zzoom	Imagine (2)
2	Jet Pac	Ultimate (5)
3	Flight Simulation	Psion (1)
4	Terror-daktil	Melbourne House (–)
5	Trans-Am	Ultimate (3)
6	Pssst	Ultimate (–)
7	Zip-Zap	Imagine (4)
8	Kong	Ocean (6)
9	Horace and the Spiders	Psion/M. House (–)
10	Arcadia	Imagine (–)

Compiled by W. H. Smith. Figures in brackets are last week's positions

BEST SELLERS

Top 30

1	Manic Miner	Bug Byte	Spectrum
2	Jet Pac	Ultimate	Spectrum
3	Trans-Am	Ultimate	Spectrum
4	Cookie	Ultimate	Spectrum
5	3D Combat Zone	Artic	Spectrum
6	Zzoom	Imagine	Spectrum
7	Chuckie Egg	A & F	Spectrum
8	Johnny Reb	Lothlorien	Spectrum
9	Krazy Kong	Anirog	VIC-20
10	Horace Goes Skiing	Psion	Spectrum
11	Pssst	Ultimate	Spectrum
12	Cuthbert in the Jungle	Microdeal	Dragon
13	Penetrator	Melbourne House	Spectrum
14	Frogger	Microdeal	Spectrum
15	Cuthbert Goes Walkabout	Microdeal	Dragon
16	Frogger	C-Tech	BBC
17	Space Shuttle	Microdeal	Dragon
18	Splat	Incentive	Spectrum
19	Gold Mine	dk'tronics	Spectrum
20	Labyrinth	Commodore	CBM 64
21	Intergalactic Force	Microdeal	Dragon
22	Hall of the Things	Crystal	Spectrum
23	Horace and the Spiders	Psion	Spectrum
24	Redweed	Lothlorien	Spectrum
25	Jumpin' Jack	Imagine	Spectrum
26	Kong	Ocean	Spectrum
27	Hunchback	Superior	BBC
28	Devils of the Deep	Richard Shepherd	Spectrum
29	Sargon Chess	Commodore	VIC-20
30	Dungeon Master	Crystal	Spectrum

Compiled by PCS Distribution (0254 691211) and sanctioned by the Computer Trade Association. Chart is for retail sales in individual outlets in the UK and Northern Ireland for the fortnight ended October 22

Top Ten programs for the Commodore 64

1	Hover Bovver	Llamasoft (1)
2	Attack of the Mutant Camels	Llamasoft (–)
3	Frogger	Interceptor (2)
4	Escape MCP	Rabbit (–)
5	Motor Mania	Audiogenic (–)
6	Gridrunner	Llamasoft (–)
7	Scramble	Interceptor (–)
8	Laser Zone	Llamasoft (–)
9	Grand Master Chess	Audiogenic (–)
10	Tank Attack	Supersoft (–)

Compiled by Boots. Figures in brackets are last week's positions

ANIROG SOFTWARE

24 HR. CREDIT CARD SALES HORLEY (02934) 6083
PAYMENT BY CHEQUE, P.O., ACCESS/VISA
8 HIGH STREET HORLEY, SURREY.
Overseas 50p post & packaging
TRADE ENQUIRIES WELCOME
29, West Hill, Dartford, Kent. (0322) 92513/8

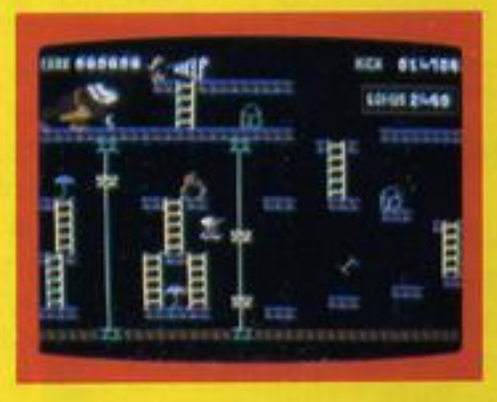
COMMODORE 64

KONG — KB / JS — £7.95

A 31 K ALL M/C PROGRAM WITH BRILLIANT ANIMATED GRAPHICS

1. CHASING FIREBALLS AND BARRELS, CAN BE SMASHED BY THE MALLET IF YOU CAN JUMP UP AND GET IT.

2. JUMP OVER THE PIES AS YOU RUN ALONG THE CONVEYOR BELT MAKE SURE YOU DONT END UP INSIDE THE COOKER.



3. THE ONLY WAY UP IS BY THE LIFT WHICH IS UNDER A CONSTANT BARRAGE OF GIRDERS.

4. KNOCK OUT ALL THE SUPPORTS BY RUNNING OVER THEM AND WITNESS THE SPECTACULAR COLLAPSE OF KONGS LAIR.

SKRAMBLE — J.S. — £7.95

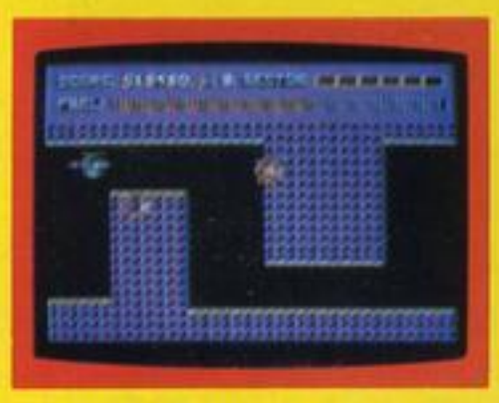
PILOT YOUR SPACE CRAFT THROUGH THE SIX DEFENCE SECTORS AND DESTROY THE COMMAND MODULE OF THE **COBRON** EMPIRE. A 32 K ALL M/C BLOCKBUSTER.

1. RAMMING MISSILES HURTLE TOWARDS YOU.

2. FIGHT COBRON QUASER ION SHIPS.

3. DODGE THE FIREBALLS, BECAUSE YOU CAN'T SHOOT THEM DOWN.

4. CITY WITH HIGH RISE BUILDINGS.



5. GUIDE YOUR SHIP WITH DEXTERITY THROUGH THE MAZE.

6. DESTROY THE BASE BEFORE YOU RUN OUT OF FUEL.

HEXPERT — J.S. — £7.95

THE EVIL WITCH ZOGANAAR HAS FORCED BERT TO PLAY ON HER 3D HEXAGONAL PYRAMID. AS HE JUMPS FROM STEP TO STEP OF THE PYRAMID. MASSIVE RUBBER BALLS BOUNCE DOWN THE PYRAMID TO CRUSH HIM. HER PET SNAKE, **COILY**, MOVES UP AND DOWN THE PYRAMID CHASING BERT. YOU HAVE TWO SPINNING DISC'S TO JUMP ON TO AND LURE **COILY** TO HIS DEATH. CAN YOU MAKE BERT THE HEXPERT?
A SUPERB ALL M/C GAME WITH EXCELLENT 3D GRAPHICS.

MOON BUGGY

EXPERIENCE ALL THE THRILLS OF THE ARCADE GAME AS YOUR PATROL CRAFT MANOEUVRES OVER THE GIANT POT HOLES.

J.S. — **£7.95**

3D TIME TREK

A 3D STAR TREK GAME WITH REAL ARCADE ACTION BATTLE WITH THE ALIENS.

K.B. / J.S. — **£5.95**

DUNGEONS

ENTER THE REALMS OF FANTASY WITH SUPERB USE OF SPRITE GRAPHICS BATTLE WITH THE FEARFUL FIRE BREATHING RED DRAGON

K.B. — **£6.95**

FROG RUN

A POPULAR ARCADE GAME BROUGHT TO LIFE WITH BRILLIANT ANIMATED GRAPHICS

K.B. / J.S. — **£5.95**

Motor-vated games for your micro

Our review panel finds itself behind the wheels of cars, a motor mover and a light cycle

Light Cycle
ORIC-1 £6.95

PSS, 452 Stoney Stanton Road, Coventry CV6 5DG

The object of this game is to ride your laser cycle around the game grid, leaving in your wake a solid laser wall.

Your opponent, human or computer, also leaves a similar wall, and if either of you hit any object on the grid then you "Derez", giving a very spectacular display.

The whole program is very well presented, giving that all important arcade quality.

There is plenty of sound, impressive graphics, a hall of fame and, most usefully, an adjustable volmum control. This last feature is one I hope to see on all new Oric games, especially in view of the Oric's rather loud sound!

Instructions are clear and concise, and the control keys (up, down, left, right and power boost) are well positioned for both players, or for player against computer.

The game itself has good graphics, and on the highest of its nine skill levels is very fast indeed. It is very addictive, and one of the few arcade action games that can be played by more than one person.

All in all, a game that offers very good, all round value for money. **M.C.**

instructions	75%
playability	80%
graphics	85%
value for money	85%

★ ★ ★ ★ ★

Racer
48K Lynx £6.95

Sian Software, 139 Rosebery Avenue, Manor Park, London E12 6PT

This is a simple game which involves steering a red car along a one way street occupied by numerous other yellow cars, travelling at the same speed.

The aim of the game is to drive the red car faster than the yellow cars, avoiding collisions by weaving between them — the object being to drive the furthest distance.

However, the fuel consumption has to be taken into account, because if the car travels too slowly it will burn too much fuel and hence run out before reaching the next garage.

The amount of fuel available and the distance to the next refuelling station are continuously displayed on the screen.

The game ends after four collisions or when the fuel runs out. At the end of the game the five best distances travelled are displayed with the names of the drivers. This last feature is worth noting, as a group of people can take turns at driving and then compare their respective scores.

Although this game can only be played at one level, it is well designed and amusing. If played in groups, it will certainly help pass winter evenings and maybe put a few bragging drivers in their place. **R.S.**

instructions	90%
playability	85%
graphics	85%
value for money	75%

★ ★ ★ ★

Canyon
32K BBC £10

British Broadcasting Corporation, 35 Marylebone High Street, London W1M 4AA

This program has to be one of the worst releases the BBC has made to date. The idea is good, but the implementation is so poor as to be almost diabolical.

With a theme of dogfights brought up to date, this could have been an exciting multi-faceted program which rivetted its players to their seats.

The truth is that this is a race-type game (you know, the kind that scroll the road past your car and you have to avoid the obstacles) married to a shooting game (get-the-nasties-before-they-get-you type).

There are several levels, 24 to be precise, all of the same type but increasing in difficulty and including some very strange colour combinations too.

There are some extra features not seen in most race-type games, such as speed controls, but they aren't enough to give this game the little bit extra we find addictive.

Very disappointing, to say the least, and very expensive to make a mistake on. See this game **before** buying it. **D.C.**

instructions	80%
playability	10%
graphics	30%
value for money	20%

★

Overtaker/ Brands Hatch
Jupiter Ace £5.95

Jupiter Cantab, Cheshunt Building, Bateman Street, Cambridge CB2 1LZ

Overtaker provides you with a large racing car on a straight track where, against a constantly decrementing clock, you seek to press on with piling up the points, which accrue only so long as you avoid a collision with an indeterminate number of smaller cars that keep coming up in your path.

If you do hit one, everything but the clock stops and you lose time. You can boost the speed as your skill increases and there's no fuzz on this road!

Brands Hatch provides an on-screen replication of the famous circuit and a timer, but any resemblance to actual motor racing ends there. You control by means of two keys the direction of a fast moving pawn which rotates about its vertical axis in a most disconcerting way.

At various points on the track its progress is impeded by groups of parked fellow pawns, which never happens even at Monza!

But if you can forget about cars and treat the game as simply a difficult piece of manoeuvring, it becomes quite a challenge and is certainly fast enough — because it is Forth — for anyone. **G.M.**

instructions	70%
playability	65%
graphics	80%
value for money	70%

★ ★ ★ ★

Hover Bovver
Commodore 64 plus Joystick £7.50

Llamasoft, 49 Mount Pleasant, Tadley, Hants

In this very original game, your task is to mow your lawn with a hover mower — while the owner tries to get it back.

The lawn has hedges and flower beds. The hedges form impenetrable barriers, and if you run over the flower beds, then someone else comes out to chase you.

You do have a dog that can be ordered to chase after your pursuers, but it only has a certain amount of loyalty, and once this has been used up you have no defence against the people who are out to get you.

The mower will overload if you run over the dog, and the dog only has a certain amount of tolerance to the mower — once this has been exhausted it will try and run into the mower, thus immobilising you. The dog cannot run over the flower beds, so you can use them to hide from it.

Points are awarded for every piece of lawn that you mow, and bonus points are awarded for how much dog loyalty is left after the job is done. Once you've finished one lawn, you move on to another with different hedges and flower beds.

instructions	70%
playability	100%
graphics	100%
value for money	85%

★ ★ ★ ★ ★

SPECTRUM PROGRAM

Will you do better than Guy?

Guy Fawkes failed to change history with gunpowder. Now's your chance to try with either model of the Spectrum. David Nowotnik explains the plot

If you have ever wanted to change history, here's your chance to try. While we're about to celebrate Guy Fawkes' abortive attempt to blow up the Houses of Parliament, you could take the part of Guy in my game for the Spectrum.

It will work on both the 16K and 48K models and, if you do your work, you could convert Parliament into a pile of rubble.

When you have finished typing the program into your Spectrum, SAVE it on tape first.

The program contains a short machine code routine; although there is a check line to prevent the program running should you have made a mistake in entering the machine code numbers (line 5,000 onwards), there is always a chance that you could slip through this net even if you have made a mistake.

When you RUN the program, the screen will stay blank for a few seconds while the variables and machine code are being set up. If you get a STOP message before anything appears on the screen, then check the machine code data lines.

If everything is OK, then a plan of the basement of the Houses of Parliament will be drawn on the screen. On the left is the lawn in front of the building, the entrance is the break in the blue wall, halfway down the screen.

You'll see that the basement is made up of lots of small rooms. Guy has hired the centre room on the far right of the screen. At the start of the game, this room has a red box in it, with the number zero in the box.

Guy is standing by his barrow (the magenta rectangle) on the lawn just by the entrance to the building.

Your mission is to guide Guy through the corridors of the building to the room in which the bombs will be placed.

If you manage to get Guy to stand next to the red square in his room, then the number in the box increases by one to indicate that another bomb has been deposited.

Guy then has to go back to his barrow (and stand on the white square at the end of his barrow) to pick up another bomb. He has to try to get a total of 10 bombs to this room. If you succeed, then Parliament is destroyed.

You control Guy with the 5,6,7 and 8 keys, his movements being in the direction of the arrows on those keys.

Inside the building is a lone unsuspecting guard. As he patrols the basement area, he keeps a sharp look-out for any intruders. If you happen to wander into his sight, then he will command you to stop. If you are carrying a bomb, arrest is inevitable.

However, if there is no suspicous evidence on you, there is a chance that he will allow you to proceed. Be sure to get out of his sight quickly otherwise he may change his mind.

If he spots you a second time, there is no way that he will let you go. Of course, if he sees the bombs in Guy's room, Guy's plot is discovered and his arrest will follow.

You may change history on screen, but be sure to enjoy the celebration of history's real outcome on November 5th.

```
 50 CLEAR 32599: RESTORE : POKE 23675,88:
POKE 23676,127
 60 FOR i=0 TO 7
 70 READ a: POKE USR "a"+i,a
 80 NEXT i
 90 DATA 24,24,60,90,90,90,24,24
100 PAPER 7: BORDER 7: INK 0: CLS
110 REM Guy's variables
120 LET y=9: LET x=2
130 LET ga=22818: LET dd=0: LET bm=1
140 LET sa=PEEK ga: LET bombs=0
150 REM Guard's variables
160 LET yg=10: LET xg=20
170 LET ag=22868: LET gd=32-64*(RND>.5)
180 DIM p(4)
190 FOR i=1 TO 4: READ p(i): NEXT i
200 DATA 1,-1,32,-32
210 REM Machine code
220 LET k=0
230 FOR i=0 TO 67
240 READ a: POKE USR "b"+i,a
250 LET k=k+a
260 NEXT i
270 IF k<>5584 THEN STOP
500 GO SUB 1000: PRINT AT 10,28; PAPER 2;
bombs
510 PRINT AT y,x; INK 1;""
520 PRINT AT yg,xg; INK 3;""
600 GO SUB 2000: IF ga=22875 AND bm=1 THEN
LET bm=0: LET bombs=bombs+1: PRINT A
T 10,28; PAPER 2;bombs
610 GO SUB 3000
620 GO SUB 3500
630 IF bombs<10 THEN GO TO 600
640 PRINT AT 21,4;"You've changed history!"
650 FOR i=1 TO 16
660 BORDER 2
670 BEEP .05,i
680 BORDER 7
690 BEEP .05,i+10
700 NEXT i
710 STOP
999 STOP
1000 REM Draw scene
1010 FOR i=1 TO 21: PRINT PAPER 4:"     ":
NEXT i
1020 PAPER 1: LET z$="
1030 PRINT AT 0,4;z$;AT 20,4;z$
1040 FOR i=1 TO 19: PRINT AT i,4;" ";AT i,
31;" "
1050 NEXT i
1060 LET z$="     "
1070 FOR i=6 TO 26 STEP 5
1080 FOR j=2 TO 14 STEP 6
1090 PRINT AT j,i;z$
1100 NEXT j: NEXT i
1110 FOR i=6 TO 26 STEP 5
1120 FOR j=6 TO 18 STEP 6
1130 PRINT AT j,i;z$
1140 NEXT j: NEXT i
1150 FOR i=3 TO 15 STEP 6
1160 FOR j=6 TO 26 STEP 5
1170 FOR k=0 TO 3
1180 PRINT AT i+k,j;" "
1190 PRINT AT i+k,j+3;" "
1200 NEXT k: NEXT j: NEXT i
1210 PAPER 7
1220 FOR i=9 TO 19 STEP 10
```

SPECTRUM PROGRAM

```
1230 FOR j=3 TO 15 STEP 6
1240 PRINT AT j,i;" ";AT j+2,i+2;" "
1250 NEXT j: NEXT i
1260 FOR i=4 TO 16 STEP 6
1270 PRINT AT i,26;" "
1280 NEXT i
1290 PRINT AT 10,4;" "
1300 PAPER 3
1310 PRINT AT 7,2;" ";AT 8,2;" "
1320 PAPER 7
1330 RETURN
2000 REM Move Guy
2010 LET z$=INKEY$
2020 IF z$="" OR z$<"5" OR z$>"8" THEN
RETURN
2030 IF z$="5" AND PEEK (ga-1)<>8 AND PEEK
(ga-1)<>24 AND x>1 THEN LET d=-1: GO TO 2100
2040 IF z$="8" AND ga<>22875 AND PEEK
(ga+1)<>8 AND PEEK (ga+1)<>24 AND x<31 THE
N LET d=+1: GO TO 2100
2050 IF z$="6" AND ga<>22844 AND PEEK
(ga+32)<>8 AND PEEK (ga+32)<>24 AND y<21 T
HEN LET d=32: GO TO 2100
2060 IF z$="7" AND ga<>22908 AND PEEK
(ga-32)<>8 AND PEEK (ga-32)<>24 AND y>1 TH
EN LET d=-32: GO TO 2100
2070 IF ga=22818 THEN LET bm=1
2080 RETURN
2100 PRINT AT y,x;" ": POKE ga,sa
2110 LET ga=ga+d: LET sa=PEEK ga
2120 IF ABS d=1 THEN LET x=x+d
2130 LET d=d/32: IF ABS d=1 THEN LET y=y+d
2140 PRINT AT y,x; INK 1;""
2150 RETURN
3000 REM Move guard
3010 IF RND>.7 THEN GO TO 3100
3020 IF PEEK (ag+gd)=8 OR PEEK (ag+gd)=32
THEN GO TO 3100
3030 REM Check if bomb found
3040 IF PEEK (ag+gd)=16 THEN GO TO 3200
3050 PRINT AT yg,xg;" "
3060 LET ag=ag+gd: IF ABS gd=1 THEN LET
xg=xg+gd: GO TO 3080
3070 LET h=gd/32: LET yg=yg+h
3080 PRINT AT yg,xg; INK 3;""
3090 RETURN
3100 REM change direction
3120 LET gd=p(INT (RND*4)+1)
3130 GO TO 3020
3200 PRINT AT 21,5; FLASH 1;"You've been
caught"
3210 STOP
3500 REM Who goes there?
3510 LET p=INT (ag/256)
3520 POKE 32618,ag-256*p
3530 POKE 32619,p
3540 LET fd=USR 32620
3550 IF fd=0 THEN RETURN
3560 IF fd=2 THEN GO TO 3800
3570 PRINT AT 21,4;"Halt! Who goes there?"
3580 FOR k=1 TO 500: NEXT k
3590 PRINT AT 21,4;"                    "
3600 IF bm=1 OR dd=1 THEN GO TO 3700
3610 LET dd=dd+1
3620 IF RND<.3 THEN GO TO 3700
3630 PRINT AT 21,4;"O.K. Off you go"
3640 FOR i=1 TO 20: GO SUB 2000
3650 PAUSE 10: NEXT i
3660 PRINT AT 21,4;"                    "
3670 RETURN
3700 PRINT AT 21,4;" You're under arrest  "
3710 FOR i=20 TO -5 STEP -.5
3720 BEEP .005,i
3730 NEXT i
3740 STOP
3800 PRINT AT 21,4;"I've found the bombs!"
3810 PAUSE 200: GO TO 3700
5000 DATA 1,0,255,255,32,0,224
5010 DATA 255,0,0,0,0,62,4,33
5020 DATA 96,127,50,104,127,78
5030 DATA 35,70,35,235,42,106
5040 DATA 127,9,126,254,8,40,14
5050 DATA 254,57,40,27,254,32
5060 DATA 40,6,254,16,40,14,24
5070 DATA 236,235,58,104,127
5080 DATA 61,32,218,6,0,14,0
5090 DATA 201,6,0,14,2,201,6
5100 DATA 0,201
```

You could be on our pages

We welcome programs articles and tips from our readers.

PROGRAMS should, if possible, be computer printed to a width of 48 characters (use a new ribbon) and/or sent on cassette. Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.

ARTICLES on using home computers should be no longer than 2,000 words. Don't worry about your writing ability — just try to keep to the style in HCW. Articles most likely to be published will help our readers make better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Liptrot, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE

SIMPLE TO USE

You want to program your own Arcade Games?

SoftwareSTUDIOS

Games Designer

Now you can! Produce your own SPRITE BASED MACHINE CODE Arcade Games

NO programming knowledge needed
EIGHT pre-programmed games included

Send to
Software Studios,
Quicksilva Mail Order,
55 Haviland Road,
Ferndown Industrial
Estate, Wimborne,
Dorset BH21 7PY
Telephone
(0703)
20169

48K SPECTRUM £14.95

DON'T MISS :
Bristol's First Personal Computer and Technology Show

BRISTOL EXHIBITION CENTRE
11th, 12th & 13th of November 83
OPEN FRI & SAT 11am - 9pm; SUN 11am - 6pm
ENTRANCE - ADULTS £1-50; CHILDREN 80p

BBC, Spectrum, Electron, Memotec, Atari, Computer Clubs, Trade Stands, Books, Software — Games, Educational, Business and lots more.

For full details contact
Bristol (0272) 650465

Adventures for sale

Our reviewers fought monsters and travelled to strange locations to bring you the inside story on these games

Movie Producer Dragon £7.95

Silly Software, 61 Thornhill, Northweald, Epping, Essex

This must be the first computer game to come complete with 3D viewing specs.

Unfortunately the 3D effect is limited to the packaging, and the game is in fact mostly text-based, hi-res graphics being used for the title page, which is accompanied by a tuneful version of a very familiar melody.

As Peeko Sputberg, film entrepreneur, you must first find a backer and then set the level of play by setting your budget and time scale.

Since you have up to $50 million and 50 days to play with, a theoretical 25 billion levels of play are claimed!

The game then follows conventional lines as you work your way through many locations, which vary from the cutting room, to a jumbo jet in mid-Atlantic. The commands are clumsy as they have to be in two letter form, eg NO for north.

Every so often, you will be hit be events good or bad, such as strikes or offers of finance.

No such random pattern is used to locate the film, though, and once you have found its location, there is little point in playing again, except perhaps to win acclaim from the critics or achieve box-office success. **E.C.**

instructions	80%
playability	60%
graphics	25%
value for money	40%

★ ★

The Black Planet 48K Spectrum £5.95

Phipps Associates, 172 Kingston Rd, Ewell, Surrey KT19 0SD

This game is a combination of arcade and adventure. You must travel round seven planets in the galaxy, obtaining parts of a key that will enable you to destroy the Black Planet, home of space pirates who are disrupting your trade routes.

This space part of the adventure requires little skill in setting up target destinations but it is very difficult to hit pursuing ships or their energy torpedoes — your shield strength suffers if you are hit.

On landing at a planet, a mini adventure task is set, though they don't really make you think hard as suggested on the cassette insert. You will quickly remember what each planet offers and, rather like the space fights, one or two are difficult as extremely quick reactions, or memory are needed.

Landing at starbase is a considerable juggling exercise — and it is a little difficult to understand the screen display relative to the instructions.

One side of the tape holds the game story and instructions, a hard task to remember. **P.C.**

instructions	85%
playability	80%
graphics	80%
value for money	80%

★ ★ ★ ★ ★

Horror Castle Dragon £6.90

A&F, 830 Hyde Rd, Manchester M18 7JD

A text-only adventure along classic lines. Your task is to rescue a princess from within a gloomy haunted castle with its many rooms, dungeons and moat.

As I confidently set off to achieve this aim, I was soon frustrated by the first of many problems — I could not get past the gate!

After numerous attempts to pass this obstacle I decided I would have to cheat and examine the program.

The program is loaded as machine code but is in fact mostly written in BASIC and uses over 30K of memory.

I was impressed by the use of single letter entry for directions, eg. N for North. This makes any game more enjoyable and faster to play. Response time was surprisingly quick and the program even calls you by name.

Yet again, the reliable Dragon tape system had no problem loading even this size of program.

If you like text-only adventures, or have not yet tried one of these most frustrating games, then Horror Castle may be worth adding to your collection, as it is easy to use, but definitely not easy to crack. As I write, I am still having difficulty making progress. **E.C.**

instructions	80%
playability	60%
graphics	n/a
value for money	70%

★ ★ ★

Dr Who the First Adventure 32K BBC £10

British Broadcasting Corporation, 35 Marylebone High Street, London W1M 4AA

Be careful, this is not an adventure as normally understood in computing circles.

The idea is a collection of episodes in a Dr Who adventure serial. There are four 'episodes' to complete in order to taste victory. The first three are best described as action-type games, the fourth as a thinking game.

The action games are a maze game called Labyrinth, a Frogger lookalike called Prison and a Galaxians-style shooting game called Terrordactyls.

Of these, my favourite was the shooting game, with birds that have a nasty habit of hitting you from the side, and the least attractive and poorest was the Prison game.

The final game is a 'black box' type which I can only describe as Battleships in three dimensions. You can scan the box in order to find the hidden aliens.

Overall, the games are fair value for money but you are going to take a long time to complete this adventure and graduate from the Time Lords Academy.

The theme is well maintained, and your constant enemy is Time itself — you have only one hour in which to complete the game. **D.C.**

instructions	80%
playability	75%
graphics	60%
value for money	60%

★ ★ ★

Gorgon 48K Spectrum £4.95

Phipps Associates, 172 Kingston Rd, Ewell, Surrey, KT19 0SD

This program does not live up to other offerings from this company either in concept or implementation.

The game and instructions are separated. The instructions are clear and, like the game, loaded reliably. But the game itself is rather wooden, and lacks real flair.

You must reclaim a chalice entrusted to you for safe keeping and stolen and protected by the dual evils Gorgon and Grang, (sounds like a music hall duo!).

The first part of the task requires you to avoid the Gorgon's direct stare by looking at her in your shield and deflecting her glance so that she herself becomes the victim. Your shield may be angled in different directions. You have three lives.

Well, that's loosely connected with ancient legend — except I always thought of Gorgon as a she, and here it is a he.

The Gorgon dodges round a rather crude temple 'set' and is not difficult to defeat. If you do not achieve your task you may die, or your village may be flooded by the angry gods.

Defeat of the guardian Gorgon allows you entrance to the cave of Grang the evil swordsman. **P.C.**

instructions	80%
playability	60%
graphics	30%
value for money	50%

★ ★ ★

ORIC PROGRAM

Bat your way out of that

An arcade classic for your collection. David Nowotnik wrote his version of Breakout for any Oric

A mixture of BASIC and machine code are used in this simple version of the popular Breakout game for the Oric 1. The program was developed on a 48K Oric, but should fit a 16K model.

To use the program, simply key in Listing 1, save it on tape, then RUN. It is important that you save it before running, as the command in line 30 provides you with copy protection.

It ensures that, as soon as you press CTRL C or the reset button to stop the program, an automatic NEW occurs.

So if you save the program with AUTO (for an automatic start after loading), you can prevent simple copying of this program, or any program you value.

Back to Breakout. When you RUN the program you will see a title page, and the option to get instructions. In this version of the game you are served with a total of 10 balls, which you have to bounce off the bat at the base of the screen, and direct towards the bricks at the top.

Each time the ball hits a brick, the brick is removed (with an appropriate sound effect), and the ball is returned to you. If you miss the ball, you lose it, and the next is served.

As the game goes on, you will find that you will sometimes knock out several bricks before the ball is returned, but it is very difficult to tell where the ball is going.

With one point for every brick removed, the object of the game is to achieve a high score. If you succeed in removing all the bricks, a new wall is created.

You move the bat with the left and right cursor control keys (either side of the space bar). A 'natural' bounce of the ball will always occur, i.e. the horizontal direction of the ball remains the same, but the vertical direction is reversed when hitting the bat.

My original version of this game was written entirely in BASIC, but the action was too slow. So to speed up the game, a machine code routine was incorporated. The machine code appears as a hex dump in lines 40 to 70, and is POKEd into place by the routine starting at line 100.

The machine code routine moves the bat. It checks if the left or right cursor key is pressed, and, if so, checks that the bat is not at its extreme left or extreme right position.

If all is OK, then the entire line on which the bat appears is erased, and a new bat printed in its new position. All this happens so quickly that you won't appreciate all that is going on!

I've not included a assembly language listing of the machine code routine. But machine code enthusiasts need not be disappointed, for coming soon in Home Computing Weekly will be complete machine code disassembler program for the Oric to enable you to obtain you own listing on this routine.

How it works

30 copy protection
40-70 machine code data
80-90 user defined graphics data
100-210 loads machine code and udgs. Initialise main variables
220-280 main title and instructions option
290-370 set up the screen
320-400 deliver the ball
410-510 check to see what the ball has hit. Bounce as necessary, and check if ball is still in play. Remove a brick if hit and increment the score
600 set up a new wall if all bricks removed
900-940 game over message
1000 print wall subroutine
1100-1430 sound subroutines
5000 instructions

Main variables

DS,DHS,ES,RTS,LS used for cursor control and double height printing
TS title border
WLS a row of bricks in the wall
C(5) the colours of the bricks
D the direction of the ball
B the number of balls played
LC left corner screen address
RC right corner screen address
X screen address of the ball

```
10 REM   £€€€ Breakout €€€£
20 REM      1983, D.P. Nowotnik
30 DOKE£1B,DEEK(£FFFC)
40 DATA£AD,£08,£02,£C9,£BC,£F0,£07,£C9,£AC,£F0,£0E,£4C,£59,£18,£A5,
£50,£C9
50 DATA£24,£B0,£0D,£E6,£50,£4C,£59,£18,£A5,£50,£C9,£05,£90,£02,£C6,
£50,£A0
60 DATA£24,£A9,£20,£91,£51,£88,£D0,£FB,£A4,£50,£A9,£5B
70 DATA£A2,£04,£91,£51,£88,£CA,£D0,£FA,£60,£FF
80 DATA63,63,63,0,0,0,0,0,56,56,56,56,56,56,56,56,7,7,7,7,7,7,7,7
90 DATA0,0,0,0,0,63,63,63,0,12,30,63,63,30,12,0,0,31,31,31,31,31,31
,31
100 HIMEM6144:TEXT
120 POKE618,10
130 DIMC(5)
140 POKE£50,14:DOKE£51,49002
150 X=6200:REPEAT:READY:POKEX,Y:X=X+1:UNTILY=255
160 X=46807:FORI=1TO4B
170 READY:POKEX+I,Y:NEXT
180 D$=CHR$(10):DH$=CHR$(4):E$=" "+CHR$(27):RT$=CHR$(9):L$=CHR$(8)
190 IN^4:PAPER6:CLS
200 WL$="}":FORI=1TO36:WL$=WL$+CHR$(96):NEXT:WL$=WL$+"\"
210 T$=" £€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€€ "
220 PRINT:PRINTT$:FORI=1TO24:PLOT2,I,"£":PLOT37,I,"£":NEXT:PLOT1,25
,T$
230 PRINTD$D$D$D$;TAB(4);DH$E$"N"E$"A          Breakout"E$"J"DH$
240 PLOT37,7," ":PLOT37,8"" "
250 PLOT9,10,"(C) 1983, D.P. Nowotnik"
260 PLOT6,20,"Do you want instructions (y/n)"
270 GETZ$:Z=ASC(Z$):IFNOT(Z=78ORZ=89ORZ=110RZ=121)THEN270
280 CLS:IFZ=89ORZ=121THENGOSUB5000
290 REM  Main Routine
300 FORI=1TO37:PLOT1,I,"^":NEXT
310 FORI=0TO26:PLOT1,I,"]":PLOT38,I,"\":NEXT
320 C(1)=1:C(2)=2:C(3)=0:C(4)=5:C(5)=4
330 GOSUB1000:CALL6200
340 PLOT3,0,"Score 0      Breakout    Ball£ 0"
350 SC=0:B=0:LC=48082:RC=48119:MAX=10:DW=49040
360 PLOT9,20,"Press any key to start"
370 GETZ$:PLOT9,20,"                    "
380 B=B+1:GOSUB1400:CALL6200:IFB>MAXTHEN900
390 D=39+2*INT(RND(1)+.5):X=48410-C+INT(RND(1)*10):GOSUB1300
400 CALL6200:POKEX,95:X=X+D:IFX>DWTHEN800
410 IFX=LCORX=RCTHENX=X-D:GOSUB1100:D=-D:GOTO400
420 CALL6200:IFPEEK(X)=32THENPOKE(X-D),32:CALL6200:GOTO400
430 IFPEEK(X)=92THENX=X-D:GOSUB1100:POKEX,32:D=D-2:GOTO400
440 IFPEEK(X)=93THENX=X-D:GOSUB1100:POKEX,32:D=D+2:GOTO400
450 IFPEEK(X)=91THENX=X-D:GOSUB1200:POKEX,32:D=D-80:GOTO400
460 IFPEEK(X)=94THENX=X-D:GOSUB1100:POKEX,32:D=80+D:GOTO400
470 POKE(X-D),32:POKEX,95:SC=SC+1:PRINTCHR$(30);"} Score ";SC
480 SOUND4,5000,0:PLAY1,0,1,1000:PLAY1,1,1,500
490 IFD>0THEND=D-80ELSED=D+80
500 IFSC/180=INT(SC/180)THENGOTO600
510 GOTO400
600 GOSUB1000:MAX=MAX+2
800 POKE(X-D),32:FORI=1TO20:CALL6200:NEXT:GOTO380
900 PLOT16,18,"GAME OVER":SOUND1,200,0:PLAY1,0,2,2000
910 PLOT5,20,"Do you want another game(y/n)"
920 GETZ$:IFZ$="N"ORZ$="n"THENCALL62509
930 IFNOT(Z$="Y"ORZ$="y")THEN920
940 CLS:GOTO300
990 STOP
1000 FORI=1TO5:PLOT0,I+2,C(I):PLOT1,I+2,WL$:NEXT:RETURN
1100 SOUND1,2000,0:PLAY1,0,1,1000:RETURN
1200 SOUND1,400,0:PLAY1,0,1,1000:RETURN
1300 PRINTCHR$(30):PRINTL$L$L$L$L$;B
1310 RETURN
1400 FORK=1TO10:X=C(1):SOUND1,500,K:SOUND2,1000,K:PLAY3,0,0,0
1410 FORL=1TO4:C(L)=C(L+1):CALL6200:NEXTL
1420 C(5)=X:FORL=1TO5:PLOT0,L+2,C(L):CALL6200:NEXTL
1430 NEXTK:PLAY0,0,0,0:RETURN
5000 REM   Instructions
5010 PRINTD$DH$E$"J"E$"A          Breakout"DH$
5020 PRINTD$D$D$"  The object of the game is to knock"
5030 PRINT"bricks from the wall. You do this by"
5040 PRINT"bouncing the ball off the bat at the"
5050 PRINT"bottom of the screen. The bat is "
5060 PRINT"moved left by pressing the cursor left";
5065 PRINT"key (to the left of the 'space'"
5070 PRINT"key), and right by pressing the "
5080 PRINT"cursor right key."
5090 PRINTD$" If you miss the ball, then another"
5100 PRINT"will be delivered. But the maximum"
5110 PRINT"number of balls is 10."
5120 PRINTD$"If you manage to remove all the"
5130 PRINT"bricks, you will get another wall."
5140 PRINTD$" The object is to achieve a high"
5150 PRINT"score."
5160 PRINTD$D$"          Press any key to start"
5170 GETZ$:CLS:RETURN
```

"ADVENTURES INTO IMAGINATION"

"ADVENTURES INTO IMAGINATION"

AVAILABLE FROM W.H. SMITH, JOHN MENZIES, BOOTS
AND ALL LEADING COMPUTER STORES

A spine chilling adventure ... enter via the dungeons ... navigate your way through 500 3-D rooms ... survive the swooping vampire bats ... reach the terrifying top ... confront and kill Count Kreepie, ridding the world of this Transylvanian Terror.

Can you survive the Top of the Tower? **£6.50.**

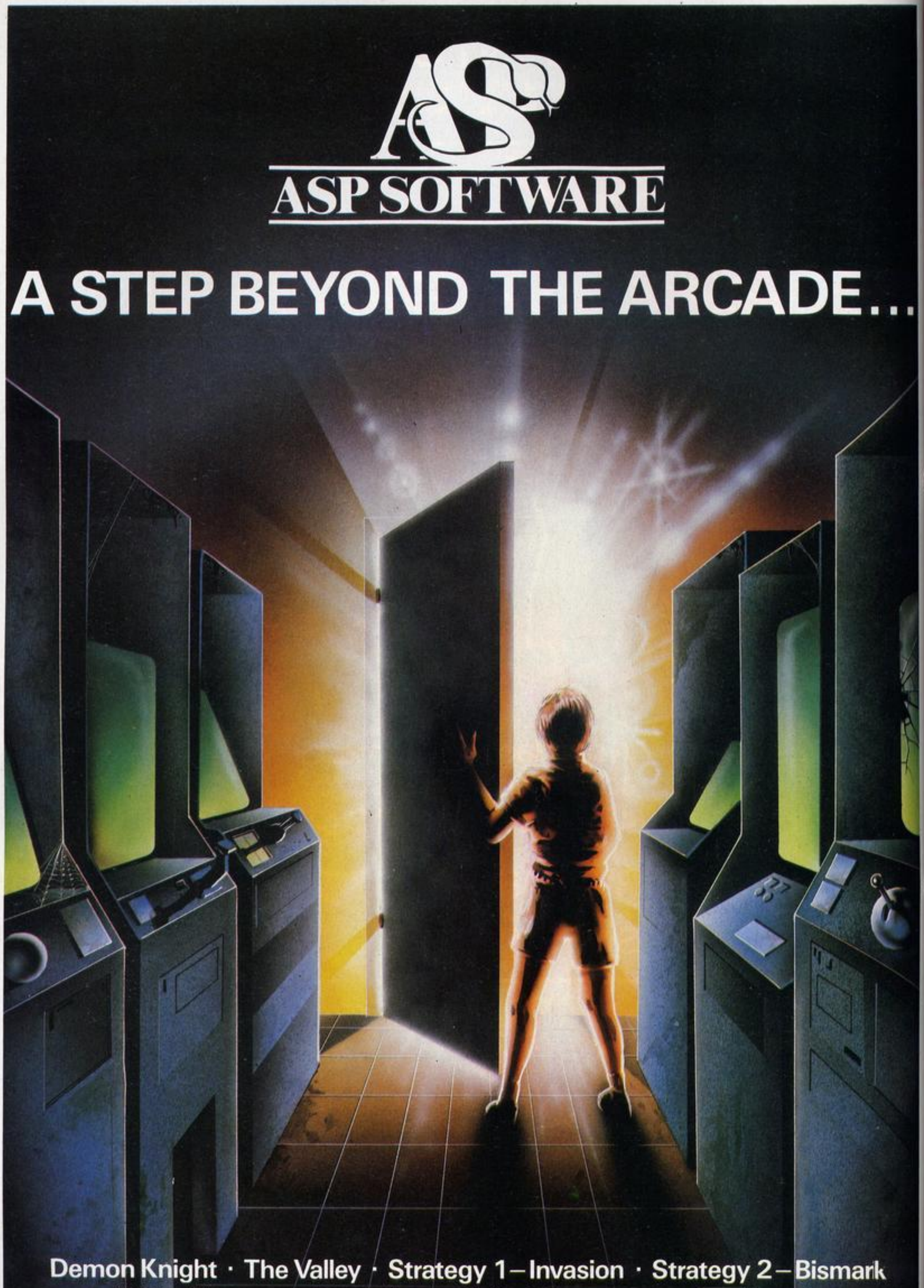
RICHARD SHEPHERD SOFTWARE

NEW DEALERS WELCOME — RING JOHN SALTHOUSE ON 06286 63531

All programs are sold subject to the condition that they may not, by way of trade or otherwise, be lent, hired out, resold or otherwise circulated without the written permission of Richard Shepherd

ASP SOFTWARE

A STEP BEYOND THE ARCADE...



Demon Knight · The Valley · Strategy 1—Invasion · Strategy 2—Bismark
White Barrows · Detective · Cells & Serpents · Stockmarket
Conquering Everest · Cloneit/Renumber · Gallery of Death · Planetfall

HORNSBY

ASP SOFTWARE
145 Charing Cross Rd, London WC2H OEE
Tel: 01-437 1002

Now available from:

Telford Electronics
Inside Bambers
Telford Town Centre
Shropshire

John W Bagnall Ltd
18 Salter St
Stafford ST16 2JU

Mega Ltd
7 Anley St
St Helier
Jersey

Computer Cabin
24 The Parade
Silverdale
Newcastle
Staffs

Software City
3 Lichfield Passage
Wolverhampton
W Midlands

D A Computers Ltd
104 London Rd
Leicester LE2 0Q2

Fal Soft Computers
8 St Georges Arcade
Falmouth
Cornwall TR11 3DH

Statacom Ltd
234 High St
Sutton
Surrey

William Smith (Booksellers) Ltd
University Bookshop
White Knights
Reading RG6 2AH

The Car Shop
103 Lower Lickhill Road
Stourport

Canterbury Software Centre
9 The Friars
Canterbury
Kent CT1 2AS

JCV Organisation Ltd
Units 7/8
Wharf St
Warwick
CV34 5FO

The Dragon Dungeon
PO Box 4
Ashbourne
Derbyshire DE6 1AQ

3D Computers Ltd
230 Tolmouth Rise South
Surbiton
Surrey

Vision Store
96/98 North End
Croydon CR0 1UD

Philip Copley Hi Fi Ltd
6 Wisley Street
Clifford Court
Ossett
Wakefield
N Yorks

Micro North
7 Broad Street
Bury
Lancs

4-Mat Computing
67 Fnargate
Preston
Lancs

Channel 8 Software Ltd
51 Fishergate
Preston
Lancs

Windsor Computer Centre
Thames Avenue
Windsor
Berks

Rush Hi Fi & Video
5-6 Cornhill
Chelmsford
Essex

Amersham Computers
18 Woodside Rd
Amersham
Bucks

Godfreys
30 East Walk
Basildon
Essex

Estuary Software Products
261 Victoria Avenue
Southend on Sea
Essex

Software Centre
128 Wigmore St W1

Dimension
27/29 High St
Leicester

Vic Oddens
5 London Bridge Walk
London SE1

Computer Plus
2 Church Lane
Banbury
Oxon

K P Cameron & Computer Shop
12a Kings Parade
Cambridge

Gemini Electronics
50 Newton St
Manchester

Sherwoods Photographic Ltd
11-13 Gt Western Arcade
Birmingham B2 5HU

Brainwave Micros Ltd
24 Crown St
Ipswich
Suffolk IP1 2LD

Micro Business Centre Ltd
17-19 Lichfield St
Wolverhampton WV1 1EA

Trend & Hi Fi Video
167 High St
Walthamstow
London E17 9PD

Eddy's (Nottm) Ltd
ENL Audio Visual
116/118 Alfreton Rd
Nottingham NG7 3NR

Cannock Computer Systems Ltd
18 Old Penkridge Rd
Cannock
Staffs WS1 MZ

G Foster
C B TV Hi Fi & Video
Sales & Service
59 Tamworth St
Lichfield
Staffs

U.S. SCENE

My Rachel, 16 months, gets the bug

Computer Literacy Division, Human Interest Department. For the last several months our daughter Rachel has been fascinated with my computing system, especially with my printer. Whenever she would hear it going, she would run in and demand to be picked up to watch it printing. During one such session while I was holding her, I asked her if she could tell me the name of the computer.

Much to my amazement, she said "Apple!" in her little voice. (I am sure she figured it out because of the logo, but it still came as a surprise.)

Now, if any of our friends care to learn the name of Rachel's favourite computer, they need only ask. Rachel was all of 16 months old at the time she figured this out. I am sure by the time she is two or three years old, she will be a better programmer than I am. After all, I never recognized a personal computer until I was almost 30!

★ ★ ★ ★

As long as I am in the human interest mode, here is a novel computer literacy marketing strategy. Post Cereals (a division of General Foods, a very large company indeed) in cooperation with Atari have agreed to promote computer literacy by running an advertisement campaign on the boxes of children's cereal.

The purpose of the campaign is to promote a 10-city tour of seminars put on by a non-profit organization called People's Computer Company. The tour is to take place during the next three months, starting in New York and heading west. At each venue, computing professionals will present 80 hours of free seminars, as well as giving out booklets and advice on computer basics. Approximately 50,000 students and adults are expected to attend these events which will be presented for 10 days in each of the 10 cities.

And now the answer you have undoubtedly been waiting for. Yes, you can send your box tops (or other proof of purchase) and receive "free" hardware and software from Atari. Although I do not know for sure, I would expect you would have to be a real cereal lover in order to get a free system.

All credit to Atari and General Foods marketers for this truly visible way of bringing computer literacy to the breakfast tables of America. Now, the question is: will it be swallowed?

★ ★ ★ ★

Now here's something I know you've all been waiting for: Computer kitsch!

CompuGifts, of Mission Viejo, California, has now introduced a line of terminal gadgets. Wouldn't you love to put a Computer Caddy on your desk to hold your pens, pencils, erasers, and paper clips? Aren't you just dying to repot your Begonia into a Computer Planter? These gadgets resemble various computers, are made of plastic (of course) and measure about four by six by four inches, and of course have a clear plastic screen on one side for storing a meaningful photo.

I am sorry that I cannot provide a better address, because I know they would be just deluged with orders from the U.K. As for me, I shall wait until they make available an Apple II ash tray (just kidding folks).

★ ★ ★ ★

The well known Japanese film company, Fuji Film, has just entered the floppy disc market here. They have been making discs in Japan since 1977. Just recently they have introduced a line of 8 inch discs (FD) and 5.25 inch discs (MD).

The firm guarantees them to be error-free, whatever that may mean, and apparently also indicates they they will still perform after 10 million passes. Anyone from Fuji care to come out to my house and count for me? Just what this country needs, one more floppy disc company.

That's all for this week. See you next time.

Bud Izen
Fairfield, California

Are your finances driving you mad?

Do you find that working out your finances makes your head buzz?
Do you see red?
Don't worry, now you can have Hilton's **Personal Banking** System on your side, giving you a clear head start and (hopefully) putting you back into the black!
Maintain permanent records and fully detailed statements of your finances + Search facility.
Bank Reconciliation module is included to automatically match your Bank Statement to your **PBS** account.

- **ZX81 £9.95 (16K)**
- **ZX SPECTRUM £12.00 (48K)**
- **DRAGON £12.00 (32K)**
- **BBC £9.95 (32K) PBS only**

guaranteed after sales maintenance provided.

NEW RELEASES

SPECTRUM (48K)
GARDEN BIRDS **£6.50**
A captivating introduction to Ornithology and entertaining
PLAY TYPE & TRANSPOSE. £9.00
Compose, transpose key, Play it Save it, Print it!
DRAGON (32K)
UTILITIES 1 ..... **£5.00**
Including Compress, Catalogue and Copy
DISASSEMBLER **£5.00**
Prints either to screen or printer in HEX and MNEMONICS
MEMORY MAP **£5.00**
Over 9 A4 pages of Dragon Memory locations. INVALUABLE!

ORDER by POST (specifying machine)
OR at the POST OFFICE using TRANSCASH ACCOUNT 302 9557

HILTON COMPUTER SERVICES

Hilton Computer Services Ltd
(Dept 8C) 14 Avalon Road, Orpington, Kent BR6 9AX

Ask for the PBS at your local computerstore.

MICROSPHERE

MICROSPHERE COMPUTER SERVICES LTD
72 ROSEBERY ROAD · LONDON N10 2LA
TELEPHONE 01-883 9411

EVOLUTION (48K Spectrum)
Can you trace the course of evolution from the primordial soup to man, keeping a balanced world and surviving the odd disaster as you go ?
Should be easy. . . after all it's been done before!
Only **£6.95**

OMNICALC (48k Spectrum)
The best Spectrum spreadsheet you can buy. Written in machine code to be faster, to give you more space for data, and to allow more features to be included it is guaranteed uncrashable.

"If more programs shared the quality of OMNICALC, then we might see more Spectrums in offices." Home Computing Weekly 3/5/83

"It is ideal for someone who has just found the spreadsheet concept, but it is also a very powerful tool for anyone who has used one previously." Sinclair User June 1983

Complete with comprehensive manual **£9.95**

ZX-SIDEPRINT (Spectrum & ZX81 versions)
Use ZX-Sideprint to print sideways, giving you 80/132 etc. characters per line (State version reqd) **£4.95**

CREVASSE & HOTFOOT (any Spectrum)
Can you make it across the ice-cap whilst chasms open and close all around? Or, help the rabbit get to fields full of carrots – but remember! the plumper the rabbit, the greater the danger.
2 original games for only **£4.95**

NEW! **THE TRAIN GAME** (any Spectrum) **NEW!**
First there were model railways, then there were computers. Now Microsphere gives you both in one.
Featuring passenger, goods & express trains; tunnels; viaducts; points; stations; turntable bonus games; collisions; derailments; irate passengers; and everything else you expect from a major railway!
Two track layouts on each cassette. Superb value for money.
Only **£5.95**

★ ★ ★ DRAGON/ORIC WORDPROCESSOR ★ ★ ★

Fed up with game playing??? Turn your Oric-1 48K or Dragon-32 into a word processor for only £17.25. Our cassette based WP is menu and cursor driven. The main options are:

CREATE EDIT RETRIEVE SAVE PRINT
RENAME VERIFY (Dragon only) TAPEPRINT

Other features include character and bulk delete, tabulation, auto repeat (Even on the Dragon!), a printer menu enabling you to specify your document format independent of text entry, and save of print format with document. This WP is suitable for any printer which can be interfaced to the Oric or Dragon-32. Hear what the reviews say:

"All in all a very well written and documented piece of software" — ORIC SOFTWARE. "Easy to use. Clear documentation. Works well with Microline, Epson and Seikosha printers" — DRAGON USER

The JUNIPER COMPUTING WP is available from good computer dealers, or direct from ourselves, for £17.25, including operating manual.

CHEAP PRINTERS!!!! FREE DELIVERY!!!!

We are now able to offer the following very special prices on printers:

	M.R.P.	Our Price
Star DP510 80 col, 100cps, F/T, 2.3K buffer	332.35	282.35
Star DP515 136 col, 100cps, F/T, 2.3K buffer	458.85	335.00 (Yes 335.00!)
Shinwa CTI CP80 80 col, 80cps, F/T	332.35	282.35
Star STX80 80 col, 60cps, Friction	171.35	149.95
MCP40 4 colour printer plotter	169.95	149.95
Seikosha GP100-A	247.25	215.00
Epson FX80 80 col, 169cps, F/T, 2K buffer	503.70	470.00
Epson RX80 80 col, 100cps, tractor	342.70	312.70

COMPUTERS — NEW LOW PRICES!!!
FREE DELIVERY!!!!

Oric-1 48K With free game	139.99
Dragon 32	172.00
Dragon Disc Drive & Controller	275.00

All prices include VAT and delivery to UK mainland. Prices subject to change without notice. Please send cheque or PO with order. ACCESS accepted. Send for our **FREE DRAGON/ORIC** software list.

JUNIPER COMPUTING

8 Pembroke Green, Lea, Malmesbury, Wilts SN16 9PB.
Tel: 066-62-2689.

TEXAS INSTRUMENTS

TI 99/4A Solid State Software

Some of our Crazy Prices for Software

EXTENDED BASIC	£52.25
MINI MEMORY	£52.25
BLASTO	£10.50
PARSEC	£24.50
TUNNELS OF DOOM	£20.80
SOCCER	£12.50
MUNCHMAN	£24.50

PARCO SOFTWARE
THE CASTLE (GRAPHICS CASSETTE IN EX BASIC) **£5.00**

POST & PACKING FREE — VAT INCLUDED
SEND S.A.E. FOR FULL PRICE LIST
PLEASE MAKE CHEQUES PAYABLE TO

PARCO ELECTRICS

4 DORSET PLACE, NEW STREET
HONITON, DEVON, EX14 8QS
TEL: HONITON (0404) 44425

TI-99/4A PROGRAM

A six-gun game for your Texas micro

You're on target for fun when you type in Tony Garner's Astro Gallery game for the standard TI-99/4A

You have six guns to fire at two targets which move at random round a galactic shooting gallery.

If you hit one, you score 100 points, but if you miss, you lose a number of points determined by the level of difficulty. This also decides how many shots you have to start off with, and how quickly you run out of time. You have one bonus shot as well as the ammunition shown at the bottom right of the screen.

The level of difficulty also plays a part in your final score, along with number of points scored and how much ammunition was left unused.

The gallery beats you if you score more than 3010 penalty points, or if your penalty becomes higher than your score.

There's plenty to watch, and a dazzling reward for a good shot.

How it works

100-120 clear screen, set high score and screen colour
130-150 set characters to blue
160-190 print title page and pause
200-230 difficulty level
240 keep T in range 1-10
250-310 preset variables
320-350 set characters to screen colour, to set up screen invisibly; clear screen
360 sets guns to screen colour
370-410 predefine characters
420 fills screen with background characters
430-490 base for guns; locate guns
500-520 top, sides of frame
530-640 set working colours to make everything appear
650-940 plot captions
950 escapes from caption plot routine
960-990 caption plot routine
1000 plots countdown indicator
1010-1020 record score and shots fired
1030-1080 initialise and plot target positions
1090-1120 save present target positions
1130 generates random number to move first target
1140-1190 record another turn in game sequence. If necessary, plot a countdown block and go to end of game routine, set counter back to 0
1200 noise for character movement
1210 determines the direction of the target
1220-1330 set the new target position, plot the last position of the target as a space, keep the target's new coordinates in the frame
1340 branches to detect gunfire
1350-1370 if shots fired exceed ammunition, end game
1380-1530 repeat 1130 and 1200-1340 for second target
1540 if guns haven't been fired, don't plot shots/total
1550-1590 plot shots/total and reset flag
1600-1620 repeat 1350-1370
1630 return to start
1640-1660 looks for keypress, goes back to game-loop if no key pressed or wrong key pressed
1670 reduces K to range 1-6
1680 takes appropriate action on keypress
1690-1820 fire gun in correct column
1830 augments shot-counter
1840 sets flag to show shot fired
1850 branches to scoring routine if gun is fired in either target's column. Otherwise goes to penalty routine
1860 directs to scoring routine
1870 ends gunfire subroutine if points scored
1880 increases penalty points
1890 noise
1900-1930 prints new penalty score
1940 branches to end of game routine if penalty exceeds score or if penalty exceeds 3010 points
1950 ends gunfire subroutine if penalty points scored
1960 begins points scored routine by augmenting score
1970-2020 whizz and flash
2030-2060 print new score
2070 reset screen colour
2080 ends score routine
2090 begins end of game routine
2100-2110 pauses
2120 clear screen
2130-2150 sets printing characters to magenta
2160 totals score
2170-2180 convert negative scores to 0
2190-2200 set high score if necessary
2210-2270 print results and instructions
2280-2290 wait for keypress
2300-2310 reset penalty and countdown counters
2320 starts new game

Variables

HSC high score
T level of difficulty
A rate of scoring penalty points
B shots fired
G countdown rate
P position to plot countdown block
U ammunition at start
SC score
SET character set
E,F coordinates to write captions
MS caption
R,C first target coordinates
V,W stores for R,C
R2, C2 second target coordinates
V2, W2 stores for R2, C2
X random number to determine moves of targets
M flag to mark that a gun has been fired
S variable to detect a keypress
K ASCII value of key pressed
CO column in which gun is fired
L counter for penalty points

Hints on conversion

Converting the program should be easy for most machines. Relevant commands are:

CALL CHAR (ASCII code number, hexadecimal string) defines characters used in the program. The hexadecimal string defines the pattern to be given to the character with the ASCII code stated

CALL HCHAR (row number, column number, ASCII code, number of repetitions) places character with ASCII stated, at row and column specified, and optionally repeats it horizontally the number of times stated.

CALL VCHAR (row number, column number, ASCII co des, number of repetitions) works in the same way as CALL HCHAR only repeats vertically

CALL CLEAR clears the screen

CALL COLOUR (character set, foreground colour code, background colour code) specifies foreground and background colours for all characters in set specified

CALL SCREEN (colour code) specifies screen colour using colour code

CALL SOUND (duration, frequency, volume) produces sound. Duration in milliseconds, frequency in Hertz (or noise code), and volume in scale from 0 loudest to 30 quietest

CALL KEY (key unit,k,s) equivalent of INKEY$, returns code of key pressed in variable k

```
100 CALL CLEAR
110 HSC=0
120 CALL SCREEN(12)
130 FOR SET=1 TO 8
140 CALL COLOR(SET,5,12)
150 NEXT SET
160 PRINT TAB(6);"ASTRO-GALLERY!
!":::::::::
170 PRINT "USE KEYS 1 TO 6 TO FI
RE AT":::"THE DRIFTING GALACTIC"
:::"TARGETS IN THE GALLERY"::
180 FOR DELAY=1 TO 650
190 NEXT DELAY
200 CALL CLEAR
210 PRINT "GIVE ME A LEVEL OF"::
"DIFFICULTY FROM 1 TO 10 ":::::
220 PRINT "1 IS EASIEST &"::"10
IS HARDEST"::::
230 INPUT T
240 IF (T<1)+(T>10)THEN 200
250 A=(6+T)*10
260 B=0
270 B$="0"
280 G=31-T
290 P=23
300 U=102-T*2
310 SC=1000
320 FOR SET=13 TO 15
330 CALL COLOR(SET,12,12)
340 NEXT SET
350 CALL CLEAR
360 CALL COLOR(6,12,12)
370 CALL CHAR(46,"101010101010
10")
```

TI-99/4A PROGRAM

```
380 CALL CHAR(128,"FFFFFFFFFFFFF
FFF")
390 CALL CHAR(136,"0040000090000
080")
400 CALL CHAR(144,"3C7E010F42358
118")
410 CALL CHAR(152,"FFFFFFFFFFFFF
FFF")
390 CALL CHAR(136,"0040000090000
080")
400 CALL CHAR(144,"3C7E010F42358
118")
410 CALL CHAR(152,"FFFFFFFFFFFFF
FFF")
420 CALL HCHAR(1,1,136,(24*32))
430 CALL HCHAR(23,1,128,64)
440 CALL HCHAR(22,7,128,19)
450 FOR J=11 TO 20 STEP 3
460 CALL HCHAR(21,J,73)
470 NEXT J
480 CALL HCHAR(21,7,73)
490 CALL HCHAR(21,25,73)
500 CALL HCHAR(1,1,128,128)
510 CALL VCHAR(1,1,128,72)
520 CALL VCHAR(1,30,128,72)
530 CALL COLOR(2,16,2)
540 CALL COLOR(3,2,16)
550 CALL COLOR(4,2,16)
560 CALL COLOR(5,16,2)
570 CALL COLOR(6,16,2)
580 CALL COLOR(7,16,2)
590 CALL COLOR(8,16,2)
600 CALL COLOR(13,15,1)
610 CALL COLOR(14,2,2)
620 CALL COLOR(15,12,1)
630 CALL COLOR(16,7,1)
640 CALL SCREEN(6)
650 M$="ASTRO-GALLERY"
660 E=23
670 F=9
680 GOSUB 960
690 M$="****POINTS*****"
700 E=1
710 F=8
720 GOSUB 960
730 M$="PLUS"
740 E=1
750 F=3
760 GOSUB 960
770 M$="MINUS"
780 E=1
790 F=24
800 GOSUB 960
810 M$="SHOTS***"&B$
820 E=3
830 F=12
840 GOSUB 960
850 HSC$=STR$(HSC)
860 M$="HISC**"&HSC$
870 E=24
880 F=1
890 GOSUB 960
900 U$=STR$(U)
910 M$="AMMO**"&U$
920 E=24
930 F=23
940 GOSUB 960
950 GOTO 1000
960 FOR J=1 TO LEN(M$)
970 CALL HCHAR(E,F+J,ASC(SEG$(M$
,J,1)))
980 NEXT J
990 RETURN
1000 CALL VCHAR(13,31,79,10)
1010 GOSUB 2030
1020 GOSUB 1900
1030 R=12
1040 R2=12
1150 IF N<>G THEN 1200
1160 P=P-1
1170 CALL HCHAR(P,31,152)
1180 IF P=13 THEN 1610
1190 N=0
1200 CALL SOUND(-100,110,3,1047,
3,1760,3)
1210 ON X GOTO 1220,1240,1260,12
80
1220 R=R+1
1230 GOTO 1290
1240 R=R-1
1250 GOTO 1290
1260 C=C+1
1270 GOTO 1290
1280 C=C-1
1290 CALL HCHAR(V,W,136)
1300 IF R<5 THEN 1220
1310 IF R>20 THEN 1240
1320 IF C>29 THEN 1280
1330 IF C<4 THEN 1260
1340 GOSUB 1640
1350 IF B>U THEN 1360 ELSE 1380
1360 E$="GAME OVER - GAME OVER!"
1370 GOTO 2100
1380 X=INT(RND*4)+1
1390 CALL SOUND(-100,554,3,1047,
3,1760,3)
1400 ON X GOTO 1410,1430,1450,14
70
1410 R2=R2+1
1420 GOTO 1480
1430 R2=R2-1
1440 GOTO 1480
1450 C2=C2+1
1460 GOTO 1480
1470 C2=C2-1
1480 CALL HCHAR(V2,W2,136)
1490 IF R2<5 THEN 1410
1500 IF R2>20 THEN 1430
1510 IF C2>29 THEN 1470
1520 IF C2<4 THEN 1450
1530 GOSUB 1640
1540 IF M<>1 THEN 1600
1550 B$=STR$(B)
1560 FOR J=1 TO LEN(B$)
1570 CALL HCHAR(3,20+J,ASC(SEG$(
B$,J,1)))
1580 NEXT J
1590 M=0
1600 IF B>U THEN 1610 ELSE 1630
1610 E$="GAME OVER - GAME OVER!"
1620 GOTO 2100
1630 GOTO 1070
1640 CALL KEY(0,K,S)
1650 IF S=0 THEN 1950
1660 IF (K<49)+(K>54)THEN 1950
1670 K=K-48
1680 ON K GOTO 1690,1710,1730,17
50,1770,1790
1690 CO=7
1700 GOTO 1800
1710 CO=11
1720 GOTO 1800
1730 CO=14
1740 GOTO 1800
1750 CO=17
1760 GOTO 1800
1770 CO=20
1780 GOTO 1800
1790 CO=25
1800 CALL SOUND(-150,-6,0)
1810 CALL VCHAR(7,CO,46,14)
1820 CALL VCHAR(7,CO,136,14)
1830 B=B+1
1840 M=1
1850 IF (CO=C)+(CO=C2)THEN 1860
ELSE 1880
1860 GOSUB 1960
1870 RETURN
1880 L=L+A
1890 CALL SOUND(-250,110,0)
1900 M$=STR$(L)
1910 FOR J=1 TO LEN(M$)
1920 CALL HCHAR(3,26+J,ASC(SEG$(
M$,J,1)))
1930 NEXT J
1940 IF (L>SC)+(L>=3010)THEN 20
0
1950 RETURN
1960 SC=SC+100
1970 CALL SOUND(-500,523,0,659,0
,784,0)
1980 CALL COLOR(14,7,7)
1990 CALL SCREEN(7)
2000 CALL COLOR(14,12,13)
2010 CALL COLOR(14,7,12)
2020 CALL SCREEN(6)
2030 M$=STR$(SC)
2040 FOR J=1 TO LEN(M$)
2050 CALL HCHAR(3,3+J,ASC(SEG$(M
$,J,1)))
2060 NEXT J
2070 CALL COLOR(14,2,2)
2080 RETURN
2090 E$="THE GALLERY HAS BEATEN
YOU!"
2100 FOR DELAY=1 TO 1500
2110 NEXT DELAY
2120 CALL CLEAR
2130 FOR SET=1 TO 8
2140 CALL COLOR(SET,14,15)
2150 NEXT SET
2160 SC=((SC-((U-B)*5))-L)*T
2170 IF SC<0 THEN 2180 ELSE 219
2180 SC=0
2190 IF SC>HSC THEN 2200 ELSE 2
10
2200 HSC=SC
2210 CALL SCREEN(15)
2220 PRINT E$:::
2230 PRINT "YOUR FINAL SCORE":"
ADJUSTED FOR DIFFICULTY)":"IS:-
::
2240 PRINT SC:::
2250 PRINT "BEST SCORE SO FAR:-
::
2260 PRINT HSC::
2270 PRINT "PRESS ANY KEY TO PLA
Y AGAIN"
2280 CALL KEY(0,K,S)
2290 IF S=0 THEN 2280
2300 L=0
2310 N=0
2320 GOTO 200
```

Help yourself with these

These programs are claimed to make the programmer's life easier — but do they really? See what our reviewers thought

Toolbox 32K BBC £21

British Broadcasting Corporation, 35 Marylebone High Street, London W1M 4AA

This package is an excellent set of programmers' utilities which I doubt if I will ever be able to do without again.

The cassette contains 25 or so programs, suitable for both cassette and disc users, which show the thought and skill one would expect from the people who brought you The Computer Programme. It is accompanied by a 208-page book too.

The utilities range from the ubiquitous Character Generator to the excellent Squeeze programs which deserve special mention.

Whether you're writing software for money or pleasure, one method of making your program run faster and take up less space is to pack your lines with as many statements as possible. Unfortunately this makes the programs very difficult indeed to debug.

This trio of routines makes this a doddle! All you do is write your program in single statement lines and then, after testing, use the first program to get rid of all REMarks, the second to remove unwanted spaces and the third to 'pack' the statements on to as few lines as possible.

There are many other equally good and useful routines including sorts, graphic dump, disassembler and RAM tester. Fantastic value, easy to use and utterly painless. **D.C.**

instructions	100%
ease of use	95%
display	n/a
value for money	100%

★ ★ ★ ★ ★

Super Talk 48K Spectrum £5.95

Abbex, Tavistock House, 34/36 Bromham Rd, Bedford

This is a very interesting idea that almost comes off. Load the demonstration tape, and your Spectrum speaks recognisable words.

It will read out numbers produced at random, call red alert, and so on, in response to data produced by a BASIC program.

The second side of the tape allows you to set up words of your own, using a sound tape of the words, but this process is very difficult to carry through effectively.

The volume level of the recorded signal must be exactly right, and the actions involved need to be precisely timed. Perhaps with more time and patience, a better result might have been achieved.

The carefully-detailed instructions unfortunately contained some minor problems, such as an instruction to GOTO a non-existent line.

While that was not important in practice, there was a definite problem over the editor routine used to set up new words, in that after an error it was necessary to re-enter the editor. As a guess, the form RANDOMISE USER EDIT was tried, and it worked. **D.T.**

instructions	75%
ease of use	50%
display	n/a
value for money	80%

★ ★ ★ ★

The Key Spectrum £5

Keysoft, 6 Bruce Grove, Tottenham, London N17 6RA

Copying commercial software (in the piracy of your own home!) is an infringement of the Copyright Acts, and Keysoft take pains to advise you of this fact.

There are, of course, occasions when you will want a backup copy of your favourite program, and The Key will provide just that for you, quite easily.

What it won't do is break into a program for you, which has to be a point in its favour, although there are tapes on the market purporting to do that, with the intention, I suppose, of trying to find out a programmer's 'secrets'.

There are really only two parts to any program — the idea or concept, and the actual programming.

The first is inspiration, and the second the result of hard work learning the craft. **B.B.**

instructions	80%
ease of use	70%
display	n/a
value for money	70%

★ ★ ★ ★

Spectrum Kopykat Spectrum £4.95

Medsoft, 61 Ardeen Road, Doncaster, S Yorks DN2 5ER

Firstly, I have no intention of becoming involved in the debate about copying tapes. I am reviewing the program in the belief that it will only be used to make back-up copies for the owner's personal use. After all, we are all full of integrity — aren't we?

My copy was supplied without instructions, but a good program of this type should have enough prompts to make it usable without them.

The tape loaded easily and auto ran, the prompt "stop tape" appeared so I loaded a tape. Once in, the prompt "stop tape" plus the usual SAVEing prompt appeared. I dutifully exchanged tapes and the program SAVEd. As easy as that.

I tried a variety of tapes by a selection of well-known companies and all bar one copied.

One did fail, however, which makes Medsoft's claim to copy all tapes invalid. Otherwise even 41K and headerless programs copied successfully.

On side two is a tape header reader program, useful if you want to know where a routine is located in order to dissassemble it. **R.E.**

instructions	n/a
ease of use	100%
display	n/a
value for money	80%

★ ★ ★

Mikro 64 Commodore 64 £50

Supersoft, Winchester House, Canning Road, Wealdstone, Harrow

If you plan to write any machine code routines of significant size, the only logical method is to use an assembler.

This assembler comes in a cartridge with an A5 size instruction booklet. The cartridge auto-runs on switch on and resides in the block starting at $9000. As a consequence you have 30719 bytes free.

This is, however, sufficient to write enough source code for about 3-4K of object code at one sitting. If your source code is very large, you can split the source code into several files and these can be assembled in a linked sequence.

The actual assembler uses standard mnemonics for the source code. The BASIC editor is used to create the source code and normal saving and loading is used to handle files.

The assembly process uses three passes and consequently, allows you to use labels and incorporate simple arithmetic in the source code. The code is assembled to RAM rather than to tape or disk: a surprisingly handy system.

The usual pseudo-op codes (WOR, END, BYT and TXT) are available, as are commands for listing the assembled code and generating a label table. **A.W.**

instructions	85%
ease of use	95%
display	n/a
value for money	100%

★ ★ ★ ★ ★

AGF

MICRODRIVE COMPATIBILITY

Computer Trade Association Member

PROGRAMMABLE JOYSTICK INTERFACE for Spectrum or ZX81

ONLY 32.95 +£1.00pp

PROGRAMMABLE INTERFACE

The AGF Programmable Joystick Interface is a unique design offering the use of any Atari-compatible joystick with absolutely all software, whether it is cassette or ROM cartridge, with the Sinclair Spectrum or ZX81.

The hardware programmable interface requires no additional software and accurately replicates the keys of the computer in a manner which is responsive to absolutely *ALL* key reading methods, both BASIC and Machine Code.

The interface does not interfere with key operation and can therefore be used simultaneously with the keyboard.

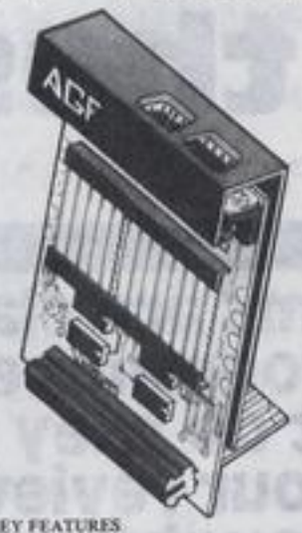
There is no need to remove the interface once fitted as the rear extension connector will accommodate further expansion, i.e printers or RAM packs etc. This important feature avoids excessive wear to the expansion port.

The key replication principle pioneered by AGF means that your own programs can use eight directional joystick movement by utilising simple key reading BASIC.

Two joystick sockets are provided which share the same keys, for use with the majority of two player games. Several interfaces may be used on the same computer for multiple joystick applications.

The interface is programmed by a two digit code, which is looked up on a programming chart supplied, for each direction and firing button. The two numbers are then selected on a pair of leads which are clipped onto appropriately numbered strips on the interface.

Once configured this can be marked on a Quick Reference Programming Card for storing with the game. As the programming is not power dependent the interface retains the last configuration made and can be immediately used when next switched on.



KEY FEATURES

- Programmable design gives TOTAL software support.
- Accepts Atari, Competition Pro, Wico, Starfighter, Quick Shot, Le Stick etc.
- Rear extension connector for all other add-ons.
- Free demo program and instructions.

PACKAGE CONTENTS SUPPLIED

- Programmable Interface Module as illustrated, complete with clip-on programming leads.
- Self adhesive programming chart detailing how to define which key is simulated by UP, DOWN, LEFT, RIGHT, and FIRE. This can be fixed on to the case of your computer or if preferred the protective backing can be left on. The chart is made of a very durable reverse printed plastic and is extremely easy to read.
- One pack of ten Quick Reference Programming Cards for at-a-glance setting to your games requirements. The card allows you to mark the configuration in an easy to read fashion with space to record the software title and company name.
- Video Graffiti demonstration program which is written totally in BASIC to illustrate how all eight directions and fire can be read. This is also a useful high resolution drawing program.
- 12 months guarantee and full written instructions.

JOYSTICKS

CONTROLLERS

FOR USE WITH OUR INTERFACE Module or VIC 20, Commodore 64, Atari VCS, Atari 400, Atari 800

If you require extra Joysticks for our original interface module mark order 'OLD' Joysticks

ONLY £7.54 inc VAT + P&P

ALL ORDERS CONFIRMED

PLEASE ALLOW 28 DAYS FOR DELIVERY

FROM: MR/MRS/MISS

ADDRESS

HCW35

SEND C.W.O. (NO STAMP NEEDED) TO: A.G.F. HARDWARE, DEPT.

FREEPOST, BOGNOR REGIS, WEST SUSSEX, PO22 9BR

QTY	ITEM	ITEM PRICE	TOTAL
	PROGRAMMABLE INTERFACE	33.95	
	JOYSTICK(S)	7.54	
	PACK(S) QUICK REFERENCE CARDS	1.00	
ONE	VIDEO GRAFFITI	FREE	
		FINAL TOTAL	

ZX81 ☐ ZX SPECTRUM ☐ Please tick

DEALER ENQUIRIES WELCOME *EXPORT PRICES ON APPLICATION*

JOYSTICK INTERFACE II for Spectrum or ZX81

ONLY £9.95 +£1.00pp

NEW PRICE £15.95

JOYSTICK INTERFACE

The Interface Module II has been specially designed to plug on to the rear connector of your ZX Spectrum or ZX81 and allow you to connect any standard Atari type digital Joysticks. All of the computer's connections are duplicated on an extension connector so that you can still use any other devices intended for use with your computer.

The Interface Module II resides in the same memory space as the keyboard, which remains fully functional at all times, therefore it will not interfere with anything else connected.

When a suitable joystick is plugged into 'Player 1' socket its action will mimic pressing the cursor keys, up "7", left "5" and so on. The firing button will simulate key 0. This unique feature guarantees the best software support.

Take a look at the selection of compatible games we have listed. More are being added all the time as a result of our contact with the various software companies.

A second Joystick may be connected in the 'Player 2' position which simulates in a parallel fashion keys T-Y-U-I-P. This will allow you to play a whole new generation of two player games.

COMPATIBILITY CASSETTES ☐ £4.95

These cassettes have short programs to load before the chosen game which will convert it to use the cursor keys and therefore become compatible with the Interface Module II.

Cassette One converts:
ARCADIA
SCHIZOIDS
HUNGRY HORACE
HORACE GOES SKIING
SPECTRES
PENETRATOR

NEW!

Cassette Two converts:
CENTIPEDE †
PLANETOIDS †
JET-PAC †
PSSST †
3D COMBAT ZONE †
INVADERS †

† *Will require 48K Memory*

KEY FEATURES

- Proven cursor key simulation for maximum software support
- Accepts Atari, Competition Pro, Wico, Starfighter, Le Stick, etc Joysticks
- Second Joystick facility
- Eight directions programmed in simple BASIC

JOYSTICKS

CONTROLLERS ONLY £7.54 inc VAT + P&P

☐ *Available from us*

** State "AGF version"*

JOYSTICK INTERFACE II COMPATIBLE WITH ZX SPECTRUM

Abbex — Sinclair, Invasion, Horror, Cosmic, The Wizard Pac, High Rise, ETX
Abersoft — Mazeman, The Wizard, Warrior, Spectral Base
Apricot/Acorn Software — Galactic Attack, Labyrinth, Confusion, Chicken Feed, Gold Digger, Dalleman
Audio — Loading, Spectrapic, Night Gunner, Fighter Pilot
Campbell Systems — Froggy
CDS Micro Systems — 3D Tanx
C. Tech — Motorcade, Nightflite, Spectrapic, Moonraider
Digital Integration — Star Trek, Star Set, Zodiac, Phoenix, Ghost's Revenge
D.J.L. Software — Escape, 3D Tunnel, Knot in 3D, Time Bandit, Spectral Raid, VU-3D, Flight Simulator, Vixen Quest, Maze Snake, Space Invader, Smasher, Spectrapic, Tomb, Tiger, Ground Attack
DK 'Tronics — Cyber Rats, Pony Express, Wiz Man
Hewson Consultants — Vectra Software
ICL — Imagine — Magadodo Software — Micromania — New Generation Software — Nineteen Products — Pyson — Quest Quicksilva — R + R Software — Richard Shepherd Silversoft

ALL ORDERS CONFIRMED

PLEASE ALLOW 28 DAYS FOR DELIVERY

FROM: MR/MRS/MISS

ADDRESS

HCW35

SEND C.W.O. (NO STAMP NEEDED) TO: A.G.F. HARDWARE, DEPT.

FREEPOST, BOGNOR REGIS, WEST SUSSEX, PO22 9BR

QTY	ITEM	ITEM PRICE	TOTAL
	INTERFACE MODULE II	16.95	
	JOYSTICK(S)	7.54	
	SOFTWARE:		
	SOFTWARE:		
		FINAL TOTAL	

ZX81 ☐ ZX SPECTRUM ☐ Please tick

DEALER ENQUIRIES WELCOME *EXPORT PRICES ON APPLICATION*

If you missed out on Breadboard '79, '80, '81 and '82 . . . . Now's the time to catch up with

THE PREMIER SHOW FOR THE ELECTRONICS ENTHUSIAST!

BREAD BOARD '83

CUNARD INTERNATIONAL EXHIBITION CENTRE, CUNARD HOTEL, HAMMERSMITH, LONDON W6.

Friday November 25th 10am-6pm
Saturday November 26th 10am-6pm
Sunday November 27th 10am-4pm

Improved Venue
Offering improved facilities to the visitor, including car parking and ease of access by rail, tube and car, all in a modern attractive setting.

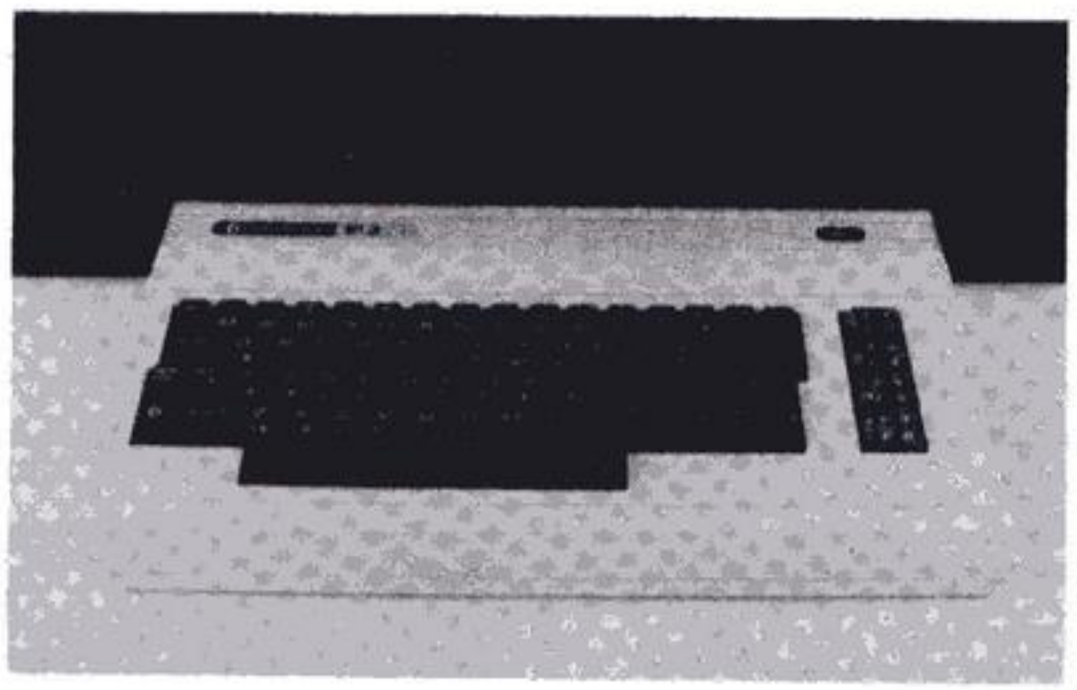
Holiday Weekend
Why not bring your partner to the show and enjoy a weekend in London? A complete hotel package is available to our visitors to the exhibition with all inclusive rail tickets. Send now for details of what *we*, the organisers, can offer *you*.
Write to:
Breadboard '83
ASP Exhibitions
145 Charing Cross Road
London WC2H 0EE

This year's features include

- Computer controlled model railway competition. (send off for entry form now)
- Kits components and tools to build all sorts of projects
- Robotic display
- Components and tools at bargain prices
- Technical advice on electronics projects and Ham Radio technique
- Computer Corner – 'Try before you buy'
- Lectures by professionals covering aspects of electronics and computing
- Holography and Producing Printed Circuit Boards
- Pick of the projects – Demonstration of the best from ELECTRONICS TODAY INTERNATIONAL, HOBBY ELECTRONICS AND ELECTRONICS DIGEST.

Park your spaceship — then run for your money

Central TV's Saturday Show made this game a runner-up in a computer competition. Now you can try Giovanni Quaglia's two-part Parker for the VIC-20 with Super Expander and joystick



My two-in-one Parker game makes the most of the VIC's high-res graphics, sound and colour. To play it, you'll need the Super Expander and a joystick.

In the first part of the program, your task is to land your spaceship on a landing site — the points you win for this depend on the position of the site.

Once you have managed to do this 15 times, on you go to the next part.

In this, you find yourself in a maze, and you must run around collecting money bags. This part won't get any easier the more you play, because the maze is different each time.

And once you've picked up all the money bags, you start again at the beginning of part 1 — but now the game is faster.

If you can win a high enough score, you'll get your name in the Hall of Fame.

The program itself has to be entered in two parts, too. Program 1 defines the hi-res graphics and gives instructions. Program 2 is the actual game.

When Program 1 is run, it will give you instructions, then ask you to load Program 2.

How it works

1-8 clear screen and set landing site variables
199-200 set other variables, set screen colour and hi-res
300-530 print screen
900-1000 how many ships landed and how many left
1020-1027 see if you have crashed
1030-1040 see if you have landed
1100-1200 joystick input
2000-2040 end game routine
2100-2130 crash routine
2200-2410 change score
4000-4630 draw maze
4640-4670 joystick input
4700-4730 new player position, check to see if landed on a tip or an alien
5000 check to see if all tips picked up
5010-5060 move robot

Note: The reversed symbol in lines 2120, 2400 and 4700 is to enter the Super Expander into music mode, and is obtained by pressing CTRL and left arrow

Line 480 is too long to be typed in longhand, so uses the shorthand for PRINT which is "?"

First type in PARKER 1, run it to check for errors, then save it. Type NEW, then type in PARKER 2. Run it to check for errors, then save it on the same side of the cassette.

Variables

S1%, S2% etc landing site positions
C position of ship
T time delay
M, MS sound
G number of ships parked

```
27 DATA0,0,0,0,0,0,0,0
28 DATA0,1,3,7,15,255,255,63
29 DATA255,255,63,31,15,7,3,1
30 DATA255,255,252,248,240,224,192,128
31 DATA255,255,255,255,255,255,255,255
32 DATA255,255,255,255,255,255,255,255
33 DATA24,255,24,36,60,126,66,195
34 DATA66,60,173,189,255,60,36,231
35 DATA0,0,0,24,24,0,0,0
36 DATA0,0,28,34,34,60,0,0
37 DATA16,82,60,60,66,52,42,73
38 DATA145,82,50,4,239,36,74,137
39 DATA60,126,102,110,110,98,126,60
40 DATA60,126,98,122,98,110,98,60
41 DATA60,126,98,122,114,122,98,60
42 DATA60,126,106,106,98,122,122,60
43 DATA60,126,98,110,98,122,98,60
44 DATA60,126,110,110,98,106,98,60
45 DATA60,126,98,122,122,122,122,60
46 DATA60,126,98,106,98,106,98,60
47 DATA60,126,98,106,98,122,98,60
48 DATA254,130,130,130,194,194,194,254
49 DATA4,4,4,4,12,12,12,12
50 DATA254,130,2,254,192,192,194,254
51 DATA254,130,2,62,2,194,194,254
52 DATA128,128,136,254,8,24,24,24
53 DATA254,130,128,254,2,194,194,254
54 DATA254,128,128,254,194,194,194,254
55 DATA254,130,2,2,6,6,6,6
56 DATA254,130,130,254,194,194,194,254
57 DATA254,130,130,254,2,6,6,6
58 DATA255,175,143,175,241,251,241,255
59 DATA255,255,195,255,255,195,255,255
60 DATA255,195,223,195,251,195,255,255,999
65 POKE51,0:POKE55,0:POKE52,28:POKE56,28:A=7384
70 READB:IFB>256THEN90
80 POKEA,B:A=A+1:C=C+B:GOTO70
90 IFNOT(A=7656ANDC=33589)THENPRINT"■■DATA ERROR":STOP
100 COLOR3,4,1,1
120 PRINT"□       ■■          "
130 PRINT"       ■ ■PARKER■■ "
140 PRINT"       ■■          "
150 PRINT"■           BY"
160 PRINT"■  GIOVANNI  QUAGLIA"
170 PRINT"■ ■YOUR JOB IS TO PARK     THE SPACESHIPS ON     THE  LANDING SITES."
180 PRINT"  TO DO THIS YOU USE        A JOYSTICK.          TO PARK(AND HOVER)"
190 PRINT"PRESS THE FIRE BUTTON.■AFTER YOU HAVE PARKED  15 SHIPS YOU GO TO A"
200 PRINT"MAZE WHERE YOU PICK UP       ■YOUR TIPS■        ■■HILE AVOIDING THE"
210 PRINT"       ROBOT."
220 FORA=1TO9900:NEXTA
230 PRINT"LOAD ■PARKER 2":END
```

```
1 PRINT"□":SC$="000000"
2 S1%(0)=7819:S1%(1)=7865:S1%(2)=7895:S1%(3)=8004
4 S1%(4)=7928:S1%(5)=7948:S2%(0)=7874:S2%(1)=7983:S3%(0)=7962:S3%(1)=8035:S4%(0)
=7929
5 S4%(1)=8012:S4%(2)=8125:S5%(0)=8052:S5%(1)=7930:S5%(2)=7989:S5%(3)=8102:S5%(4)
=8126
6 S6%(0)=8073:S6%(1)=7975:S6%(2)=7902:S6%(3)=8101:S6%(4)=8128:S6%(5)=8129:S7%(0)
=8094
7 S7%(1)=8100:S8%(0)=8115:S8%(1)=7999:S8%(2)=8062:S9%(0)=8136:S9%(1)=8001:S9%(2)
=8066
8 S9%(3)=8087:S9%(4)=8108:DIMM(100)
199 Z=30720:C=7734:T=100-TZ:W=7724:M=192:MS=0:ZL=0:D=0:IFT<0THENT=0
200 COLOR0,0,14,6:POKE36869,255
300 PRINT"□■■PARKER BY G.B.QUAGLIA ■EEEEEEEEEEEEEEEEEEEEEEEE"
320 PRINT"□■ EEEEEEEEEEEEEEEEEEE  EEEEEEEEEEEEEEEEEEE  EEEEEEEEEEEEEEEEEEE "
350 PRINT"□   EE     EE            EEEEEE  E■K)M"SC$"■    EEE[▲]+■  EEE
 "
380 PRINT"□   ▲+1■EEEEE ▲1■EE EEEE       EE[▲]+1■  EE EEE[▲]■     EE EE    EEEEEE
▲]■   "
410 PRINT"□  ▲1■EEEEEE   EEE[▲]■       EEE[▲]+1■EE ▲1■EEEE   "
430 PRINT"□   [▲]+■   EE    EEE[▲]■    EEE  EE ▲1■EEE EE[▲]■    "
450 PRINT"□ ▲1■EE [▲]■   ▲1[]■ [▲]■     "
460 PRINT"□  ▲1■EE E        EEEEEE    ▲1■EEE EEEEE     EE[▲]■ "
480 PRINT"□    EEE ▲1■EE[▲]■   EEE[▲]■   EEEEEE  EE[▲]■    EE[▲]■    [▲]+1EEEEE]■
  [▲]■    "
520 PRINT"□     ▲+1[]+■      ▲]■                              ■"
530 POKE8165,31:POKE8165+Z,6
900 TL=0:IFG=15THEN4000
905 W=W-1:M=192:MS=0:POKEW,27:IFW=7701THEN2000
1000 POKEC,27:IFG=15THEN4000
1020 M=M+MS:SOUNDM,M,M,0,15:IFC+D<7724THEND=0:V=0:M=M-MS:MS=0
1021 IFPEEK(C+D)=32THEN2100
1022 IFPEEK(C-1)<>27ANDD=-1THEN2100
1023 IFPEEK(C+1)<>27ANDD=1THEN2100
1027 C=C+D:IFPEEK(C)<>27THENC=C-D:GOTO2100
1030 POKEC,28:POKEC+Z,5
1040 IF(PEEK(C+22)=29ORPEEK(C+22)=30ORPEEK(C+22)=31)ANDD=0THENG=G+1:GOTO2200
1100 FORA=1TOT:NEXT:RJ=RJOY(0):IFRJ=2ANDC<8141THEND=22:MS=-2
1110 IFRJ=1ANDC>7746THEND=-22:MS=2
1120 IFRJ=4THEND=-1:MS=0
1130 IFRJ=8THEND=1:MS=0
```

VIC-20 PROGRAM

```
1140 IFRJ=5THEND=-23:MS=2:IFPEEK(C-1)<>27THEND=-1
1150 IFRJ=6THEND=21:MS=-2:IFPEEK(C+22)<>27ANDPEEK(C-1)<>27THEND=22
1160 IFRJ=9THEND=-21:MS=2:IFPEEK(C+1)<>27THEND=1
1170 IFRJ=10THEND=23:MS=-2:IFPEEK(C+22)<>27ANDPEEK(C+1)<>27THEND=22
1180 IFRJ>127THEND=0:MS=0
1200 GOTO1000
2000 POKE36869,240:POKE36879,8:PRINT"■■YOU GOT A SCORE OF",SC$:SC=VAL(SC$)
2005 K=0:FORI=1TO5:IFSC>VAL(LEFT$(B$(I),6))THENK=I:I=5
2010 NEXT:IFK=0THENFORA=1TO2000:NEXT:GOTO2035
2015 PRINT"■■YOU GOT ONE OF THE    TOP FIVE SCORES"
2020 PRINT"■ENTER YOUR INITIALS ":INPUTI$:IFLEN(I$)>6THEN2020
2025 FORI=4TOKSTEP-1:B$(I+1)=B$(I):NEXT:B$(K)=SC$+" "+I$
2035 PRINT"■■PARKER BY G.B.GUAGLIA HALL OF FAME":FORI=1TO5:PRINT"■■"I" "B$(I):NE
XT
2037 PRINT"■■■PRESS FIRE BUTTON FOR ANOTHER GO":G=0:T=100:TP=0:LV=0
2038 IFRJOY(0)<>128THEN2038
2040 SC$="000000":SC=0:GOTO199
2100 FORI=1TO4:POKEC,I+34:SOUND0,0,0,140,15-I*2
2110 FORA=1TO100:NEXTA,I:SOUND0,0,0,0,0:POKEC,27:D=0:C=7734:M=192
2115 IFLV=3THENGOTO2000
2120 PRINT"■D1S2BEFGGCC":IFTL=1THEN4000
2130 GOTO900
2200 FK=SC
2220 FORI=0TO5:IFC=S1%(I)THENSC=SC+20
2230 NEXT:FORI=0TO1:IFC=S2%(I)THENSC=SC+30
2240 NEXT:FORI=0TO1:IFC=S3%(I)THENSC=SC+40
2250 NEXT:FORI=0TO2:IFC=S4%(I)THENSC=SC+50
2260 NEXT:FORI=0TO4:IFC=S5%(I)THENSC=SC+60
2270 NEXT:FORI=0TO5:IFC=S6%(I)THENSC=SC+70
2280 NEXT:FORI=0TO1:IFC=S7%(I)THENSC=SC+80
2290 NEXT:FORI=0TO2:IFC=S8%(I)THENSC=SC+90
2300 NEXT:FORI=0TO4:IFC=S9%(I)THENSC=SC+100
2320 NEXT:IFFK=SCTHENSC=SC+10
2400 PRINT"■D3S3CDEFGABCC"
2405 A$=STR$(SC):A=LEN(A$):R$=RIGHT$(A$,A-1):B=7-A:B$=LEFT$(SC$,B):SC$=B$+R$
2406 IFZL=1THENPRINT"■■";SC$:GOTO5000
2410 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■";SC$:C=7734:M=192:MS=0:GOTO900
4000 P=-RND(1):SP=27:SS=27:WC=31:TP=7680:DEFFNP(X)=TP+V*44+H*2:ZL=1
4010 S1=27:S2=27:RS=128:HM=9:VM=10
4200 PRINT"■■":FORF=0TO2*VM
4210 PRINTLEFT$(" ++++++++++++++++++++++ ",2*HM+3):NEXT
4215 FORA=7680TO7701:POKEA,32:POKEA+Z,6:POKEA+484,32:POKEA+Z+484,6:NEXT
4216 FORA=7723TO8163STEP22:POKEA,32:POKEA+Z,6:NEXT
4220 H=INT(HM*RND(1)+1):V=INT(VM*RND(1)+1)
4230 P=FNP(X):M=0
4300 POKEP,27:T=0
4310 IFPEEK(P-44)=WCTHENT(T)=-22:T=T+1
4320 IFPEEK(P-2)=WCTHENT(T)=-1:T=T+1
4330 IFPEEK(P+44)=WCTHENT(T)=22:T=T+1
4340 IFPEEK(P+2)=WCTHENT(T)=1:T=T+1
4350 IFT>1THEND=T(T*RND(1)):M(M)=P:M=M+1:POKEP+D,S1:P=P+2*D:GOTO4300
4360 IFT=1THEND=T(0):POKEP+D,S1:P=P+2*D:GOTO4300
4400 IFM=0THEN4500
4410 M=M-1:P=M(M)
4420 IFPEEK(P-44)+PEEK(P-2)+PEEK(P+44)+PEEK(P+2)=RSTHEN4400
4440 GOTO4300
4500 PRINT"■■";SC$:V=INT(VM*RND(1))+1:H=HM:H0=FNP(0)+1
4560 V=INT(VM*RND(1))+1:H=1:BE=FNP(0)-1
4570 P=BE+1:POKEP,33:POKEP+Z,3
4580 PC=H0-1:POKEPC,34:MC=INT(RND(1))*4
4590 D(0)=1-21*(RND(1)<.5):D(1)=1-21*(D(0)=1):D(0)=D(0)+2*D(0)*(RND(1)).0
-D(0)
4600 D(3)=-D(1):VD=D(4*RND(1))
4610 FORA=1TO9
4620 B=INT(RND(1)*506)+7680:IFPEEK(B)=27THENPOKEB,R+38:POKEB+Z,1:NEXTR
4630 GOTO4620
4640 RJ=RJOY(0):IFRJ=1THEND=-22:GOTO4700
4650 IFRJ=2THEND=22:GOTO4700
4660 IFRJ=8THEND=1:GOTO4700
4670 IFRJ=4THEND=-1
4700 POKEP,27:PE=PEEK(P+D):IFPE=27THENP=P+D:POKEP,33:POKEP+Z,3:PRINT"■■■
05000
4710 IFPE>38ANDPE<48THENM=M+1:SC=SC+(PE-38)*10:P=P+D:POKEP,33:GOTO2400
4720 IFPE=34THENLV=LV+1:TL=1:C=P:GOTO2100
4730 POKEP,33
5000 IFM=9THENG=0:TL=0:TZ=TZ+10:GOTO199
5010 T=T-1:IFT=-1THENT=3
5020 VD=D(T):PK=PEEK(PC+VD):IFNOT(PK=ZORPK=WCORPK=32)THEN5040
5030 T=T+1:T=-T*(T<4):GOTO5020
5040 IFPK=33THENC=P:LV=LV+1:GOTO2100
5050 KP=27:IFPK>38ANDPK<48THENKP=PK
5060 POKEPC,KP:PC=PC+VD:POKEPC,34:POKEPC+Z,7:GOTO4640

READY.
```


NEW!!
SPECTRUM BRIDGE PLAYER
At last you can play Bridge against your Spectrum! Uses the Acol bidding system with Stayman and Blackwood conventions. With scoring and inquest/replay facilities. The ideal complement to our Bridge Tutor programs.
48K Spectrum – £8.95

SUPERCHESS II
For Sinclair 48K SPECTRUM
THE BEST AT £7.95
● 7 levels of play ● Plays a variety of openings e.g. French Defense, Sicilian Defense, Ruy Lopez, Queen's Gambit etc. ● Self play mode ● Analyse mode ● Enhanced end-game play ● Recommended move option.

ORIGINAL SUPERCHESS
10 levels of play, plus many features
16k ZX81 £4.95 48k Spectrum £4.95

Spectrum Software
Specialists in high quality, intelligent games

ZX DRAUGHTS
For 48K Spectrum – £5.95
16K Jupiter Ace – £6.95

16k SUPERCHESS £6.95
The best 16k Spectrum Chess program. 3 levels of play with playing strength similar to the 48k version's first three levels. Analyse mode, plays several openings e.g. Queens Gambit, Ruy Lopez, plus more features. Runs on 16k and 48k Spectrum.

SUPERCHESS II
With most of the features of the Spectrum version now available for:
16K Jupiter Ace – £8.95
Lynx – £8.95

SPECTRUM BRIDGE TUTOR
Improve your Bridge with Spectrum Bridge Tutor. Uses the Acol bidding system including Blackwood and Stayman conventions. Each of the 40 hands illustrates a particular aspect(s) of the bidding and play. Following the card play is an explanation of those aspects highlighted in the hand. The correct bid and play must be made in order to progress but a help feature is included.
For 16k and 48k Spectrum –
Beginners (40 hands) £5.95
Advanced (40 hands) £5.95

COLOSSAL CAVES
(Adventure 1 by Abersoft)
Enter the Colossal Cave, discover the treasure left by the wizard. On your travels you will meet dragons, snakes, trolls and other denizons of the underworld. Be warned, this adventure can be addictive. Includes a save facility so that the adventure can be continued from the point reached when saved.
48K Spectrum £6.95

BACKGAMMON
Very popular
48k Spectrum £5.95

SUPERCODE
The ultimate Machine Code Tool Kit for the Spectrum with 60 plus routines. Both 16K and 48K versions on each cassette
16K and 48K Spectrum – £7.95

SNAIL LOGO
An advanced implementation to the Logo turtle type graphics. Uses the original style Logo instructions to control the movements of a graphical Snail around the screen instead of a mechanical turtle. Includes the following features: ● Full operating system and Editor ● Comprehensive user guide with sample programs ● Multi-level Hierarchic Procedures ● Procedures with Parameters ● Recursive Procedures ● Nestable repeat loops ● Variables ● Colour and wall bouncing controls ● 25 Language Instructions, over 20 warning and error messages ● Commands to control the optional ZEAKER turtle.
48K Spectrum £9.95

FLOATING POINT FORTH
Supports all Forth structures, the ZX printer and access to I/O ports. Has all the Spectrum hi-res colour graphics, plot and draw and beeper facilities. Allows direct entry of machine code. Comprehensive user guide
48K Spectrum – £10.95

ORIGINAL SPECTRUM FORTH
Similar facilities to the floating point version but has only integer arithmetic
16K and 48K Spectrum – £9.95

Speech from the Spectrum 48k
SOFTALK I 'Multiwords' 70 plus words £5.95
SOFTALK II 'Spacegames' 80 plus words £5.95

ZEAKER TURTLE with Pen and obstruction sensors. Can be used with our Spectrum Snail Logo. The ZEAKER can be used with both the Spectrum and ZX81 or other micros with suitable parts
ZEAKER in Kit Form – £52 P.O.A.
ZEAKER Ready Assembled – £69.50
ZX81 Interface if required £13
Spectrum Interface if required £18.50
add £3 for P&P and 15% VAT

UK Prices include post & packing. Despatch within 48 hours of receipt of order. Send SAE for catalogue Also available from WH Smith – Computer Branch
(For orders outside UK add 80p for postage).
Send cheque or postal order to: CP SOFTWARE, Dept. HCW35 Orchard Lane, Prestwood, Bucks. HP16 0NN

TOP RATES PAID FOR HIGH QUALITY PROGRAMS –
SEND YOUR MATERIAL FOR EVALUATION AND PROMPT REPLY.

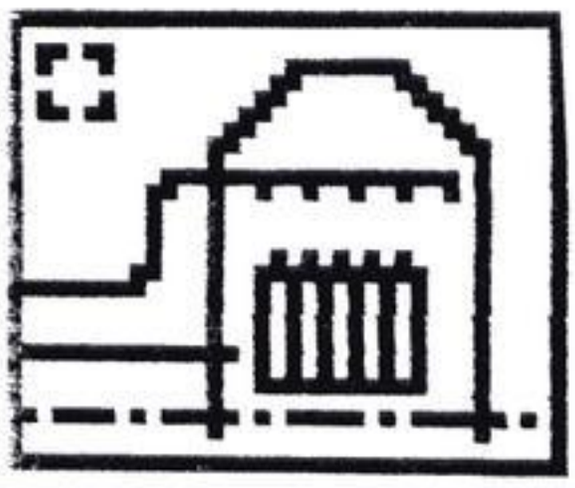
Play, draw and calculate: five 1K programs for your ZX81

ZX81 expert Nick Godwin presents five programs which fit into the ZX81's standard 1K memory. Type them in for fun as well as more serious uses

Doodlye Pad

SLOW and RUN 10 to obtain flashing cursor. This is placed at the bottom right hand corner of the available screen area. Use keys 1-8 to draw lines. Use PLOT and UNPLOT (keys Q and W) to change mode between "draw" and "erase". Press key "Z" (COPY) to dump a copy of the printer. To SAVE program with doodle intact, press key "S", type program name, switch in recorder, then press NEW LINE.

```
   1 PLOT X,Y
   2 RETURN
  10 LET X=CODE "?"
  20 LET Y=CODE "?"
  30 PLOT X,Y
  40 UNPLOT X,Y
  50 LET Z=CODE INKEY$-CODE "0"
  60 IF Z=-CODE "0" THEN GOTO CO
DE "2"
  70 GOSUB CODE ""
  75 IF Z=CODE "0" THEN INPUT X$
  76 IF Z=CODE "0" THEN SAVE X$
  80 GOSUB VAL "Z*100"
  99 GOTO CODE "2"
 800 LET X=VAL "X+(X<35)*(Z=2 OR
 Z=3 OR Z=8)-(X>0)*(Z=1 OR Z=4 O
R Z=5)"
 810 LET Y=VAL "Y+(Y<43)*(Z=1 OR
 Z=2 OR Z=7)-(Y>15)*(Z=3 OR Z=4
OR Z=6)"
2599 RETURN
3200 IF INKEY$<>"" THEN GOTO VAL
"3200"
3210 LET Z=VAL "PEEK 16513"
3220 POKE VAL "16513",VAL "PEEK
16513+6*((Z=246)-(Z=252))"
3499 RETURN
3500 COPY
9989 RETURN
```



Listing for Doodle Pad — with a sample drawn by Nick

Day of the Week

What day of the week will April 11, 2011 fall on? This program can tell you (wow!). Operates according to current calendar rules, dates before about the 15th century will not be correct.

```
  30 PRINT " INPUT D (OF MTH) ";
  40 INPUT D
  50 PRINT D,"  INPUT M","  ";
  60 INPUT M
  70 PRINT M,"  INPUT Y","  ";
  75 INPUT Y
  80 PRINT Y,,,
  90 LET R=VAL "365*Y+INT ((Y-1
)/4)-INT ((Y-1)/100)+INT ((Y-1)/4
00)-INT ((Y-1)/4E4)"
 100 LET M$="  303232332323"
 110 IF NOT VAL "Y-INT (Y/4)*4"
```

```
AND VAL "Y-INT (Y/100)*100" OR N
OT VAL "Y-INT (Y/400)*400" AND V
AL "Y-INT (Y/4E4)*4E4" THEN LET
M$(VAL "3")="1"
 120 FOR I=VAL "1" TO M
 130 LET R=R+CODE M$(I)
 140 NEXT I
 150 LET R=R+D
 320 LET W=VAL "R-INT (R/7)*7"
 330 PRINT ,"  ";"SATSUNMONTUEWE
DTHUFRI"(VAL "W*3+1" TO VAL "W*3
+3")

 INPUT D (OF MTH) 15
 INPUT M          6
 INPUT Y          1983

                  WED

 INPUT D (OF MTH) 11
 INPUT M          11
 INPUT Y          1945

                  SUN

 INPUT D (OF MTH) 1
 INPUT M          2
 INPUT Y          1971

                  MON
```

Listing for Days of the Week with sample outputs below

Primes

RUN and enter any number above 1; the program will inform you whether or not it is a prime number. Takes a while for some long numbers.

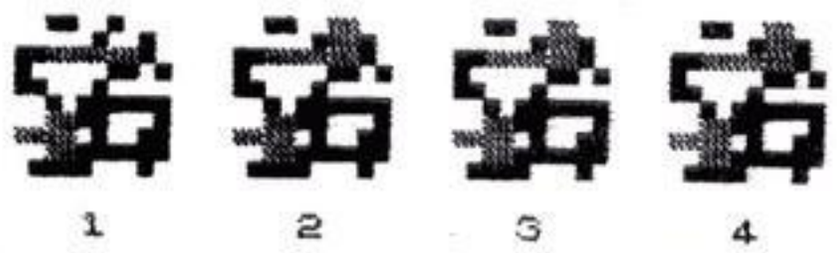
```
  10 INPUT N
  20 IF N<VAL "2" OR N<>INT N TH
EN RUN
  23 IF PEEK VAL "16442"<VAL "3"
 THEN SCROLL
  25 PRINT N;" IS ";
  30 IF N>VAL "2" AND N=VAL "2*I
NT (N/2)" OR N>CODE "▮" AND N=VA
L "5*INT (N/5)" THEN GOTO VAL "9
0"
  40 FOR J=VAL "3" TO SQR N STEP
 VAL "2"
  50 IF N/J=INT VAL "N/J" THEN G
OTO VAL "90"
  60 NEXT J
  70 PRINT "PRIME."
  80 RUN
  90 PRINT "NOT ";
 100 GOTO VAL "70"

991 IS PRIME.
9991 IS NOT PRIME.
99991 IS PRIME.
```

```
999991 IS NOT PRIME.
9999991 IS PRIME.
99999991 IS NOT PRIME.
999999990 IS NOT PRIME.
2 IS PRIME.
3 IS PRIME.
4 IS NOT PRIME.
5 IS PRIME.
6 IS NOT PRIME.
7 IS PRIME.
8 IS NOT PRIME.
9 IS NOT PRIME.
10 IS NOT PRIME.
11 IS PRIME.
12 IS NOT PRIME.
13 IS PRIME.
14 IS NOT PRIME.
15 IS NOT PRIME.
16 IS NOT PRIME.
```

Listing for Primes with samples

Spot the Odd One Out
RUN and enter the number of the pattern which you think is slightly different from the others. Press NEW LINE for another go.

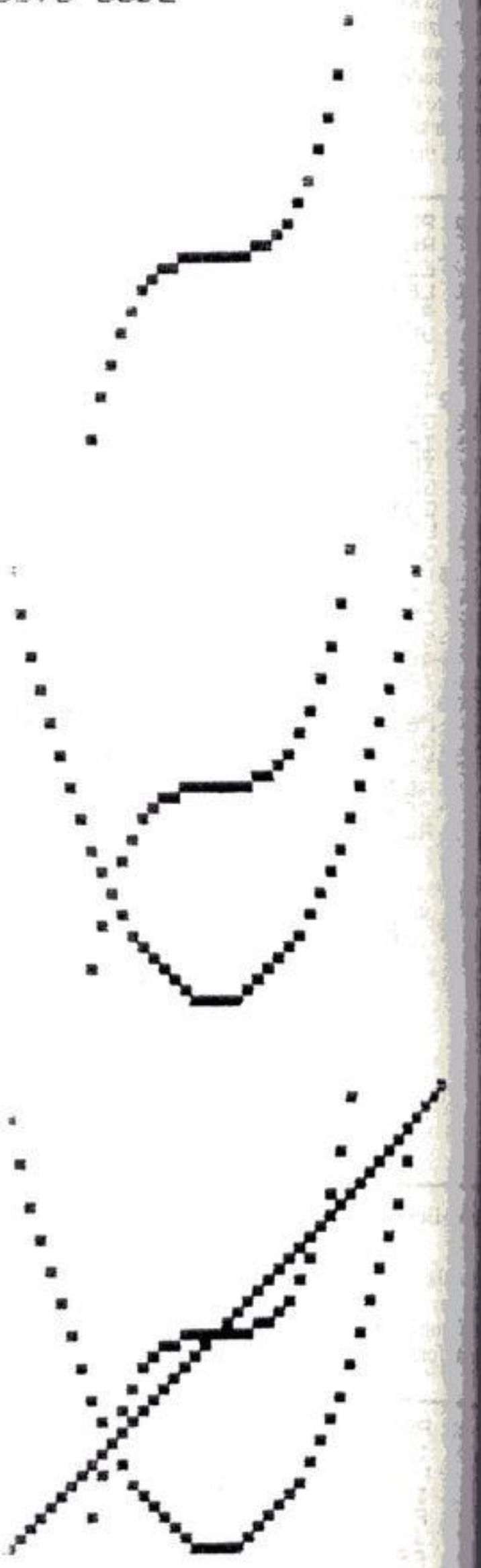
```
  10 DIM Q$(VAL "7")
  20 CLS
  30 FOR J=VAL "1" TO VAL "5"
  40 FOR K=VAL "1" TO VAL "5"
  50 LET R=INT VAL "RND*21"
  60 LET Q$(K)=CHR$ VAL "R+118*
R>10)"
  70 NEXT K
  80 PRINT "   ";Q$;Q$;Q$;Q$
  90 NEXT J
 100 LET J=INT VAL "RND*5"
 110 LET K=INT VAL "RND*5"
 120 LET R=INT VAL "RND*4"
 130 LET Q$=CHR$ J
 140 LET C$=CHR$ VAL "K+7*R+2"
 150 PRINT AT CODE Q$,CODE C$;
 160 LET J=PEEK VAL "PEEK 16398
256*PEEK 16399"
 170 LET K=INT VAL "RND*21"
 180 LET K=VAL "K+118*(K>10)"
 190 IF K=J THEN GOTO VAL "170"
 200 PRINT CHR$ K;AT VAL "6",COD
E "  ";"1       2       3       4"
 210 INPUT J
 220 PRINT AT CODE ";",CODE "";
"YES" AND J=VAL "R+1")+("NO" AND
J<>VAL "R+1")
 230 SLOW
 240 IF INKEY$<>"" THEN GOTO CODE
" LIST "
 250 PRINT AT CODE Q$,CODE C$;"X
";AT CODE Q$,CODE C$;CHR$ K
 260 IF INKEY$="" THEN GOTO CODE
" IF "
 270 FAST
 280 RUN
```



Listing for Spot the Odd One Out, plus screen dump of the game

Graph
RUN and enter the right-hand side of an equation for Y in terms of X (eg: "X/3", "(X-30)*(X-30)*(X-30)/100+2", "X*X" etc). I prefer to use this program in SLOW mode!

```
 10 INPUT X$
 20 FOR X=CODE "" TO CODE "Z"
 30 LET Y=INT (VAL X$+.5)
 40 IF Y>=CODE "" AND Y<CODE "
THEN PLOT X,Y
 50 NEXT X
 60 GOTO CODE ""
```



Listing for Graph, including how it looks when you use it

Free yourself from the Handbook

USE

MICROGUIDES

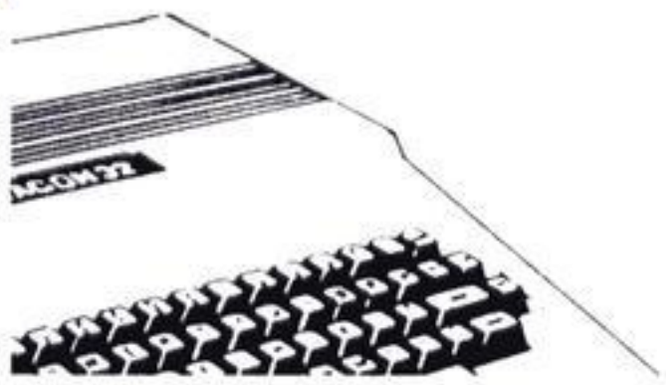
The KEYPLATES to make it easy!

Microguide KEYPLATES fit neatly over your computer keys • Gives you an easy to read list of commands • Alphabetically arranged for immediate access • Placed exactly where you require it as part of your computer keyboard • The Keyplates, made of durable plastic, have space for function key notes • 'Clean-wipe' pen for function key identity is supplied •

MICROGUIDES

Special introductory offer!

Order now and you will receive a FREE copy of "Error messages and how to deal with them."



Keyplate prices

VIC 20 £8·95

DRAGON 32 £8·95

COMMODORE 64 £9·95

BBC A & B MICRO £9·95

CHEQUES OR POSTAL ORDERS WITH ORDERS TO

MICROGUIDES

St., James House, 105-113 THE BROADWAY, EALING, LONDON, W13 9BL

Write your own machine code adventures

Without any knowledge of machine code whatsoever

THE QUILL

THE QUILL is a major new utility written in machine code which allows even the novice programmer to produce high-speed machine code adventures of superior quality to many available at the moment without any knowledge of machine code whatsoever.

Using a menu selection system you may create well over 200 locations, describe them and connect routes between them. You may then fill them with objects and problems of your choice. Having tested your adventure you may alter and experiment with any section with the greatest of ease . A part formed adventure may be saved to tape for later completion. When you have done so *THE QUILL* will allow you to produce a copy of your adventure which will run independently of the main *QUILL* editor, so that you may give copies away to your friends.

THE QUILL is provided with a detailed tutorial manual which covers every aspect of its use in writing adventures. It is impossible to describe all the features of this amazing program in such a small space so we have produced a demonstration cassette which gives further information and an example of its use.

This demo-cassette is available at **£2.00.** and *THE QUILL* itself at **£14.95.**

FOR THE 48K SPECTRUM AT £14.95

Our Software is now available from many computer shops nationwide, or direct from us by post or telephone.

SAE for full details of our range.

Dealer enquires welcome.

GILSOFT
30 Hawthorn Road
Barry
South Glamorgan
CF6 8LE
☎(0446) 736369

TELEPHONE YOUR ORDER WITH

Access BARCLAYCARD VISA

A. S. N. COMPUTER SERVICES LIMITED

ANNOUNCE

Top USA Software at Discount Prices
At least 20% Discount from Top Selling US Software

Just Look at These:

	RRP	A.S.N.
Zakkon — Datasoft — Atari	33.00	25.00
Jumpman — Epyx — Atari CB64	33.00	25.00
Miner 2049ER — Big Five — Atari	41.70	30.00
Temple of Apshai — Epyx — Atari, CB64, IBM	33.00	25.00
Zork I to III — Infocom — Atari, CB64, IBM	33.00	25.00 (each)

All Prices include VAT and Post & Packing is Free (UK mainland only). This is just a selection. We have over 500 Games/Utilities/Educational and Business programmes to choose from. To obtain up to the minute info on any programme, telephone our Hot Line — 07842 57599.

(Export Orders Welcome)

Send all orders with cheque P/O etc to:

A.S.N. COMPUTER SERVICES LTD,
Dept. H.C.W., 89 Station Crescent,
Ashford, Middx.

Nearly 700 Programmes IN STOCK
Ring for our Price List

CLWYD PERSONAL COMPUTERS

Unit 19, Daniel Owen Precinct, Mold, CH7 1AP.
Telephone: Mold 56842

ATARI®
400 inc BASIC £115
800 £290
48K Lynx £215
COMMODORE 64 £225
ORIC 1 48K £139.99p

Phone Orders Welcome on **0352-56842**

Postage & Packaging FREE
NEXT DAY DELIVERY AVAILABLE Please ring for details.
I enclose cheque/P.O. for £ _____
or please debit my Access Card No.

NAME _____
ADDRESS _____
_____ HCW35

GALAXY

Number One For Texas TI99/4A

LOOK NEW LOW PRICES

Munchman	£24.50	Speech Editor	£16.80
Extended Basic	52.50	Editor/Assembler	58.00
Chess	28.40	Dragon Mix	20.80
Adventure/Pirate	20.80	Alien Addition	20.80
All Adventures	12.50	Mini Memory	52.50
Speech Synthesiser	42.95	Music Maker	24.50
Tunnels of Doom	20.80	Invaders	16.80
Terminal Emulator	42.20	Parsec	24.50
Touch Typing Tutor	20.80	Alpiner	20.80
Soccer	12.80	32K RAM Card (Texas)	89.95

99er Magazine available including back issues

LANTERN CASSETTE SOFTWARE

Battlestar Attack	£9.95	Blasteroids	£9.95
Operation Moon	9.95	Character Generator	7.95
Scrolmaster	9.95	Ascot Stakes	7.95
Pearl Diver	5.95	Code Breaker	5.95
Daddies Hot Rod	5.95	Troll King	6.50

Large range of Books now available for TI-99/4A

COLECO AND ATARI OWNERS
Check our Prices for your Games Cartridge requirements

Remember! There are no extra charges at Galaxy.
All prices include VAT and postage. Send SAE for full list. Send cheque with order or phone or use Barclaycard or Access.

NEW TI-USER a new publication with programs, reviews, competitions, news, advisory service £6.00 p.a.

VISA Access

60 High Street, Maidstone Kent
Telephone: (0622) 682575 & 679265

NOW IN YOUR HIGH STREET SHOPS

FOOTBALL MANAGER by Addictive Games for **SPECTRUM 48K AND ZX81 16K**

3D ACTION FROM THE SPECTRUM VERSION

This superb game is **now available** from branches of **W.H. SMITH** * and **BOOTS.**

Manage your own team in this exciting game of skill which vividly captures the drama and excitement of real football.

FEATURES INCLUDE:
★ 4 DIVISIONS ★ F.A. CUP ★ PROMOTION & RELEGATION ★
★ TRANSFER MARKET ★ TEAM SELECTION ★
★ SAVE GAME FACILITY ★★★ *AND MUCH MORE!* ★★★

WHAT THE PRESS SAY ABOUT IT:—

IF YOU have always wanted to manage a football team, FOOTBALL MANAGER, from Addictive Games, is for you — The game is ideal for a football fanatic but the most interesting thing for us was the 3-D graphics used to create the goalmouth action — the game is a winner.
SINCLAIR USER FEBRUARY 1983

Although I'm no great football fan, I really enjoyed playing this game — excellent use is made of colour and user-defined graphics. The game is very logically put together, so that the development of strategy and tactics has a real effect. For example, one of my teams got through to the fourth round of the F.A. Cup where it was beaten by a second division side. This upset morale and meant that our promotion bid failed. Perhaps I should have given up the F.A. Cup run and hold some good players back — the possibilities are endless. Brian Clough had better watch out!

* **SPECTRUM VERSION ONLY.**

HCW35

ALSO AVAILABLE FROM THE FOLLOWING SHOPS:
BUTLER MICRO SHOP (London)
MICROWARE (Leicester)
ANIROG COMPUTERS (Horley, Surrey)
SUCCESS SERVICES (Walsall)
THE COMPUTER SHOP (Newcastle)
DRAGON BYTE (Leeds)
AND OTHER GOOD COMPUTER SHOPS

PRICES
FOR THE SPECTRUM 48K £6.95 (inclusive of VAT)
3D GRAPHICS ONLY IN SPECTRUM VERSION
To Order Send Cheque P.O. (payable to)
ADDICTIVE GAMES (Dept. H.C.W., P.O. Box 278, Coombelands, Milton Keynes MK11 1NJ)
PLEASE STATE COMPUTER

Have a field day with these games

Our reviewers rate some games set in the wide open spaces

Viper
32K BBC £8.95

R. H. Electronics, Chesterton Mill, French's Road, Cambridge CB4 3NP

It's hard to believe that this program has ever been released as a commercial cassette. I would even have been upset if I had spent time keying it in from a magazine.

How anyone has the audacity to charge nearly £9 for this program is beyond belief. In short, I don't like it (you'd guessed?) and it hasn't any redeeming features that I can find.

The aim of the game is to guide a snake around a box without touching the sides or the snake itself, and to eat as much as possible of the food on offer.

The snake is just a string of Teletext graphic characters which do nothing to enhance its credibility, and the food is simply a number of hash signs scattered around.

The makers seem to believe that "difficult is exciting" which I don't find to be the case.

To get on to the high scores you have to devour 100 pieces of food with a snake moving in a manner reminiscent of a burst balloon.

There isn't even a sense of achievement as you eat the food, because each piece is replaced by another — which means you never complete the screen.

The best part of this game is without doubt the instructions. **D.C.**

instructions	50%
playability	0%
graphics	10%
value for money	0%

★

Fish and Flutterer
Jupiter Ace £5.95

Jupiter Cantab, Cheshunt Building, Bateman Street, Cambridge CB2 1LZ

Arcade games are divided into those in which something is eaten and those in which something is zapped. Here is one of each.

In the first, a rather sad looking fish floats in the centre of the screen and ingests as much of the detritus moving across from the right as can be manoeuvred into his mouth by the use of vertical key movements.

At the same time, however, the player has to keep his scaly pal moving forward or he will be swept off screen left, together with the uneaten food, and the game will end.

The fish's jaws snap salaciously and the score clocks up bottom right.

Sated with all this oral satisfaction, the player can next load Flutterer, the familiar game in which seeding the random function produces a vacillating but inevitably descending croaking mannikin, jerking his limbs to be zapped by missiles fired from a mobile collar stud at the bottom of the screen.

Incredibly the missiles also have jerky legs and the score piles up as before. **G.M.**

instructions	70%
playability	75%
graphics	80%
value for money	75%

★ ★ ★ ★

Splodge
TI-99/4A £5

By Haydonsoft, from Stainless Software, 10 Alstone Road, Stockport

A game supposedly like Frogger which I found slow, difficult, and in the final analysis, rather boring.

The aim is to guide an odd-looking little character, using the E S D and X keys, through a screenful of continually moving objects.

The obstacle course is divided into two halves, in the upper of which you are forced to move diagonally, ie, up and to the right.

The two sections are separated by a 'bare area' containing moving currents which sweep you along, adding to the difficulty when choosing the moment to move.

The instructions are sparse but sufficient, although the purpose in displaying a High Score Table on the screen defeats me.

Each completed traverse — you're expected to trundle back and forth — gains you between 50 and 90 points, and the table goes up to 300 points.

Perhaps the difficulties of TI BASIC, never fast at the best of times, have contributed to the poor impact that this game has made on me.

It might have some interest for younger gamesters, but I doubt if they would stay interested for very long. **P.B.**

instructions	70%
playability	35%
graphics	65%
value for money	30%

★ ★

Exterminator
Commodore 64 £5.99

Bubble Bus, 87 High St, Tonbridge, Kent TN9 1RX

This program closely resembles the well-loved caterpillar game, albeit with differing participants.

You heroically endeavour to wipe out the sundry occupants of a field of mushrooms. The archprotagonist is a worm which weaves its way down the screen.

If you shoot it, some of its segments are destroyed and turn into mushrooms and the beast splits into smaller, faster worms.

To annoy you, a noisy eagle flaps around trying to get you. Kill it for a random bonus.

From time to time a tarantula spider will amble across the bottom of the screen. You can't kill it but it can certainly sort you out.

The mayhem is increased by a scorpion which creeps across the screen turning mushrooms into white poisonous ones. If the worm hits one of these it moves straight down the screen.

The occasional mosquito appears to replenish the mushrooms in the field.

The animation and design of the creatures are brilliant and the overall pace of the game is fast. As your score increases things get faster, busier, noisier and meaner.

A freeze game option is available so that you can get a coffee and you can disable the sound if desired.

On the minus side, the instructions were barely adequate. **A.W.**

instructions	65%
playability	90%
graphics	100%
value for money	90%

★ ★ ★ ★ ★

California Goldrush
Commodore 64 plus joystick £7.95

Anik, 30 Kingscroft Court, Bellinge, Northampton

You are a prospector, moving around squares on the screen trying to enclose them to stake your claim. When one is enclosed, points are awarded proportional to the size of the claim that has been enclosed and the level that you are on.

While this is going on, there are two Indians trying their best to kill you by running into you or, on the higher levels, shooting arrows at you. They also erase the track you leave behind to encircle the claims.

You can stop them by leaving behind a stick of dynamite as you move along. This will blow up and leave a pile of debris to obstruct them. It obstructs you, too, but the effect wears off in time.

Good graphics, with excellent representations of the prospector and injuns. Sound effects are reasonable.

There are options for a two-player game, and you can start at any of the 24 levels of play. A joystick must be used — there is no keyboard option.

The game is simple to learn and play, and is amusing — at first. The problem is that after a few plays it gets boring. There are no new surprises (apart from the arrows) as the game progresses. **M.R.**

instructions	70%
playability	30%
graphics	70%
value for money	50%

★ ★ ★

Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address

Electron by joystick

I thought other TI owners would like to know about a conversion I have made, which allows the Electron game in HCW 28 to be played with joysticks. This may also be used to create general-purpose joystick subroutines — something I found hard at first.

My conversion also includes changes to CALL KEY statements, so that they will accept lower case letters as well as upper case.

```
860 CALL JOYST(1,X,Y)
870 (ENTER)
880 IF X=4 THEN 885
    ELSE 890
885 IF Y=0 THEN 930
    ELSE 890
890 IF X=0 THEN 895
    ELSE 900
895 IF Y=-4 THEN 1020
    ELSE 900
900 IF X=0 THEN 905
    ELSE 910
905 IF Y=4 THEN 1110
    ELSE 910
910 IF X=-4 THEN 915
    ELSE 860
915 IF Y=0 THEN 1200
    ELSE 860
1840 CALL KEY(0,K,S)
1860 IF K=121 THEN 100
2470 IF K=121 THEN 2500
2480 IF K=110 THEN 2490
    ELSE 2420
2930 CALL KEY(0,K,S)
2950 IF K=114 THEN 2500
```

I also thought you'd like to know my high-score on Parsec — 309,200. It would be interesting if other TI owners who read your magazine and own Parsec could write in with the high scores that they have got on this very hard game.

By the way, on a recent holiday to Corfu I was surprised to find a copy of HCW on sale in a newsagents there!

R. C. Sanderson, Rotherham, South Yorks

The bubble explodes

We were utterly amazed to read your review on our program called Hustler, a pool game for the Commodore 64. At the time we read it we had just sold out of them at the PCW show at the Barbican.

Your review mentions the program hanging up, and highlights various other defects. Unfortunately you have reviewed an early development copy which bears little resemblance to the finished article.

We would deem it a favour if you would put the record straight for your readers.

Mark Meakings, Bubble Bus, Tonbridge, Kent

Missing symbols

I was pleased to see my COMX 35 program in HCW 31, but some of the program seems to have got lost along the way!

In case any readers were puzzled by the program, the missing bits are:

230 between A and 3 should be a less than sign
236 between B and 11 should be a less than sign
232 between A and 20 a greater than sign
234 between B and 28 a greater than sign
240 the character between quotes is shift S

Deborah Horne

Checking out Checkers

I understand that some people have been having difficulties with my Micro Checkers program, published in HCW 31.

The program will run as listed, provided that the CTRL key is held down while the positions are chosen. This ensures that moves have to be made deliberately.

If a line 1105 is added;

1105 IF (R<4)+(R>19) THEN 1070

and line 1170 is altered to

1170 IF (C<8)+(C>23) THEN 1130

then keys pressed without the control button being held down will have no effect, and it will be impossible to pick a square off the board.

The program works in this way because lines 1070 and 1130 use key unit 4, in which control codes 1 to 31 are active. This way, the values returned when a key is pressed translate directly into positions on the board.

If you want to avoid having to press the CTRL key, then you should alter line 1170 to read

1170 IF (R<69)+(R>83)+(C<72)+(C>86) THEN 1210

In this way, the program will work in its original form. If the line value 1210 is changed to 1070, the choice of squares off the board will be prevented.

If you choose to amend the program in this way you will also need to add two more lines

1171 R=R-64
1172 C=C-64

Lance Booth, Burton-on-Trent, Staffs

Invader: Arcadia's answer

I was pleased to read the letter titled Mushroom Mix-up in your No. 26 edition. It gave me a ray of hope regarding Oric Invader which I ordered in March 1983 from Arcadia.

After reading Mr Love's letter regarding Arcadia's problems, I wrote to Mr Love explaining that I sent a cheque for Oric Invader, that the cheque had been cashed and that I have not received the cassette yet.

After waiting one month for a reply from Mr Love (which seems to be normal reply time for computer companies), I thought it was time I wrote to Home Computing Weekly to let other readers know what they are letting themselves in for.

Mr Love's way of dealing with queries seems to be to forget them.

After reading several computer mags, my problem seems to be the norm. Is this the way British firms get their working capital?

M. Schofield, Wakefield, West Yorks

Mr Love, of Arcadia, said "Oh dear! That must have been one of the first orders we received for Oric Invader. I'll make sure Mr Schofield gets another tape. We did experience delivery delays when we switched duplicating companies due to loading problems, but now we've got delivery down to within a week of receiving the customer's order. Our tapes are also being distributed in some retail stores now."

Is this a record?

In HCW 24 you had an article about Pasesoft which said that Tony Reid had achieved a score of 124,000 on TI Parsec.

I have beaten this score easily with a score of 1,080,500 on my TI-99/4A.

Has any other reader of HCW beaten this score? If not, is this an all-time high?

Paul Hopkins, Downend, Bristol

Deal yourself in for patience galore

If you're an Atari owner who's keen on cards, Les Howarth has a great set of programs for you to type in. You can play straight away — and add more games with the next three issues of HCW

For anyone who likes playing patience games, here is the ultimate solitaire — no less than six different games.

The first, Hole in One, is here. There will be two more in next week's issue of Home Computing Weekly, two the week after, followed by the sixth game.

But you can start playing straight away after typing in the following listing.

Being very partial to all card games, I started with the idea of creating one or two patience games. However it has grown and continues to grow.

It is now quite a long listing and will require at least 32K to accept all six games.

Owners of 16K machines need not despair, though, because the games can be separated. Each will need the main initialisation and subroutines, which are common to all games.

Since the listing is modular, it is easy to add or delete games.

Most card players know the standard patience games of Klondike or one of its many variations (building up suit sequences on aces). I would have liked to include this one but couldn't quite get enough cards on screen when a column contains the maximum number of cards. This restriction is due to the need to get the denomination and suit of each card clearly visible.

So the six games are all entirely different from Klondike and also offer quite a variety.

A player missile cursor is used in each game to highlight the chosen card. Joystick (0) is used to move the cursor.

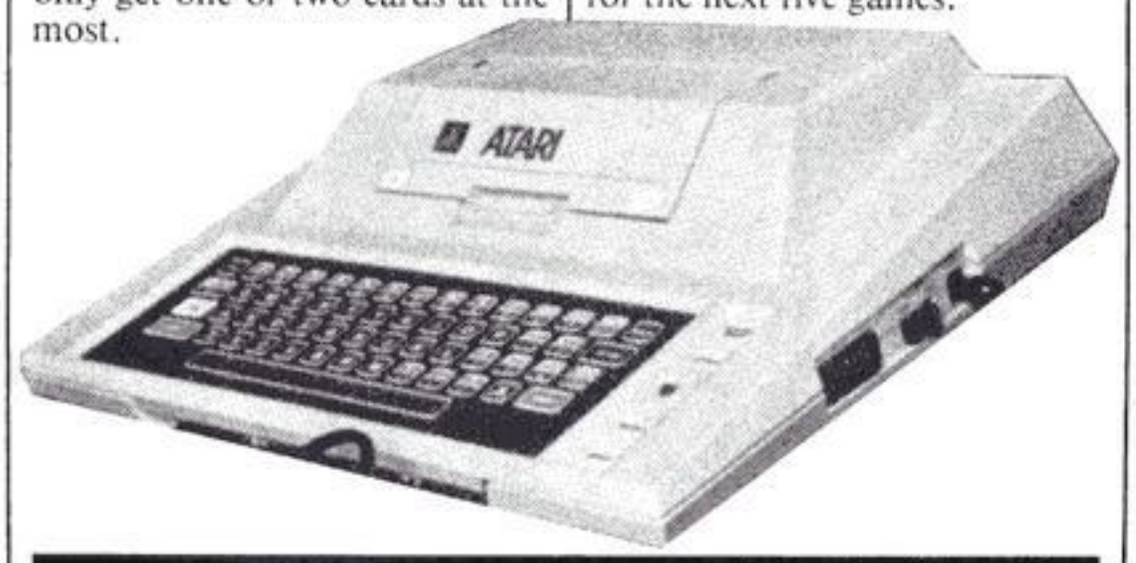
Hole in One is not easy to complete but provides a good challenge. The object of the game is to collect all the cards into one pile and some thought is needed when choosing the card to be picked up.

Any number of cards can be taken in succession providing they match or are in suit/sequence, either up or down, to the top card of the discard pile. Cards can only be taken from the bottom of a column so it is important to note what card becomes available as you remove the lowest one.

Sometimes, picking cards up in a certain order will gain extra cards from the layout.

For example: Top card of discard pile is a three of Clubs. Immediately available from the layout are three of Hearts, three of Diamonds, or four of Clubs. Suppose above the three of Hearts there is four of Diamonds. Take them in this order 3/H, 3/D, 4/D, 4/C, and you get them all but taken any other way would only get one or two cards at the most.

Note: Owners of 16K machines should SAVE this listing twice, one version minus the lines which are unique to game one — 600-660, 810-930 and 9100-9150. You will need the second listing for the next five games.



How it works
Hole in One and initialisation

20-60 set up player cursor. Strings are used to hold the data, which allows fast vertical movement in player missile graphics. **Important:** Player strings must be DIMensioned immediately. The reason is that each variable is placed in a table within memory, in the same order that you type them in. Player/missile data is then tied to the first string in the table so be sure to type line 20 first

70 branches to subroutines for initialisation, introduction and rules for each game

200-540 subroutines common to all games. This section decides denomination and suit of a card and prints on screen

600-660 set up game 1. Cards are shuffled and dealt to the layout. The deck is stored in Array P, and at this stage the cards are simply numbered, 1 to 52. As cards are dealt card value is also placed into array D. This same arrangement is used in each game.

700-740 joystick routine, again common to all games. This also constantly checks to see if any function keys have been pressed. Pressing Option Key will re-start the game you are currently playing. Pressing Start Key will return menu to allow a different game to be re-selected

810-930 belong to game 1 only. Card selection and movement is dealt with here. Check is also made to see if game has been completed or if deck is empty

1000-1300 sound routines

8000-8005 sets up a table of constants, memory saving device well worth using in such a long program. Each of these constants save six bytes of memory each time they are used, as opposed to normal numbers

8010-8040 DIMensions and initialises strings. Cursor control characters are used extensively within strings to force the cursor to move to different starting points, avoiding lots of position statements

8050 fills A $ with hearts. Hearts are used in player/missile strings as spaces

8060 clears Array D which is used to hold the layout for each game

8100-8310 introduction, menu. A display list interrupt is put into page six in order to add extra colour

9000 onward. Instructions

Special Instructions

Parts of this listing contain graphic characters and cursor arrows. The letters U. D. L. R. indicate arrows characters which must be printed within the statement.

For example: U indicates an arrow facing up, D indicates down etc.

To print an arrow, first press Esc key then hold down the CTRL key and at the same time press the appropriate arrow key.

Other characters are obtained by pressing the keys indicated.

25 B $ (1) = ESC/DEL B $ (36) = ESC/DEL. The other characters printed on this line are hearts CTRL/COMMA

200 NU $; "D D L "; SU $

530 each suit character appears on this line in this order CTRL/P CTRL/FULL STOP CTRL/COMMA CTRL/SEMI COLON

600 print HOLE IN ONE in inverse characters

840 CTRL/Z CTRL/R CTRL/R CTRL/C

900 clear screen character ESC/SHIFT/CLEAR

8020 CTRL/Q CTRL/R CTRL/E D L L L L, A vertical line using shift/Down Arrow, 2 spaces, vertical line D L L L L. Vertical line, 2 spaces, vertical line D L L L L , vertical line, 2 spaces, vertical line, D L L L L , CTRL/Z CTRL/R CTRL/R CTRL/C

BLANK $ is similar to CARD $ but contains only the cursor arrows in exactly the same positions.

8030 FD $ is a face down card. Same as CARD $ but the vertical lines and the spaces are printed in inverse

8050 A $(1) = CTRL/COMMA. A $(512) = CTRL/COMMA

8103-8104 gives each game title preceded by a graphic character. When the menu is displayed these characters will appear as numbers. This is done for more colour. Print as: CTRL/Q(space)HOLE IN ONE. CTRL/R(space) Title. CTRL/S (space) Title. CTRL/T etc, CTRL/U etc, CTRL/V etc

8105 inverse for words OPTION and START

8109 will accept any game number from 1 to 6. As there is only one game at the moment it would be advisable to alter GM (greater than) N6 to GM (greater than) N1 to avoid any errors. As each game is added this number (N) can be increased by one

8120 ESC/SHIFT/CLEAR

8250 use inverse CTRL(SEMI-COLON

10020 ESC/SHIFT/CLEAR

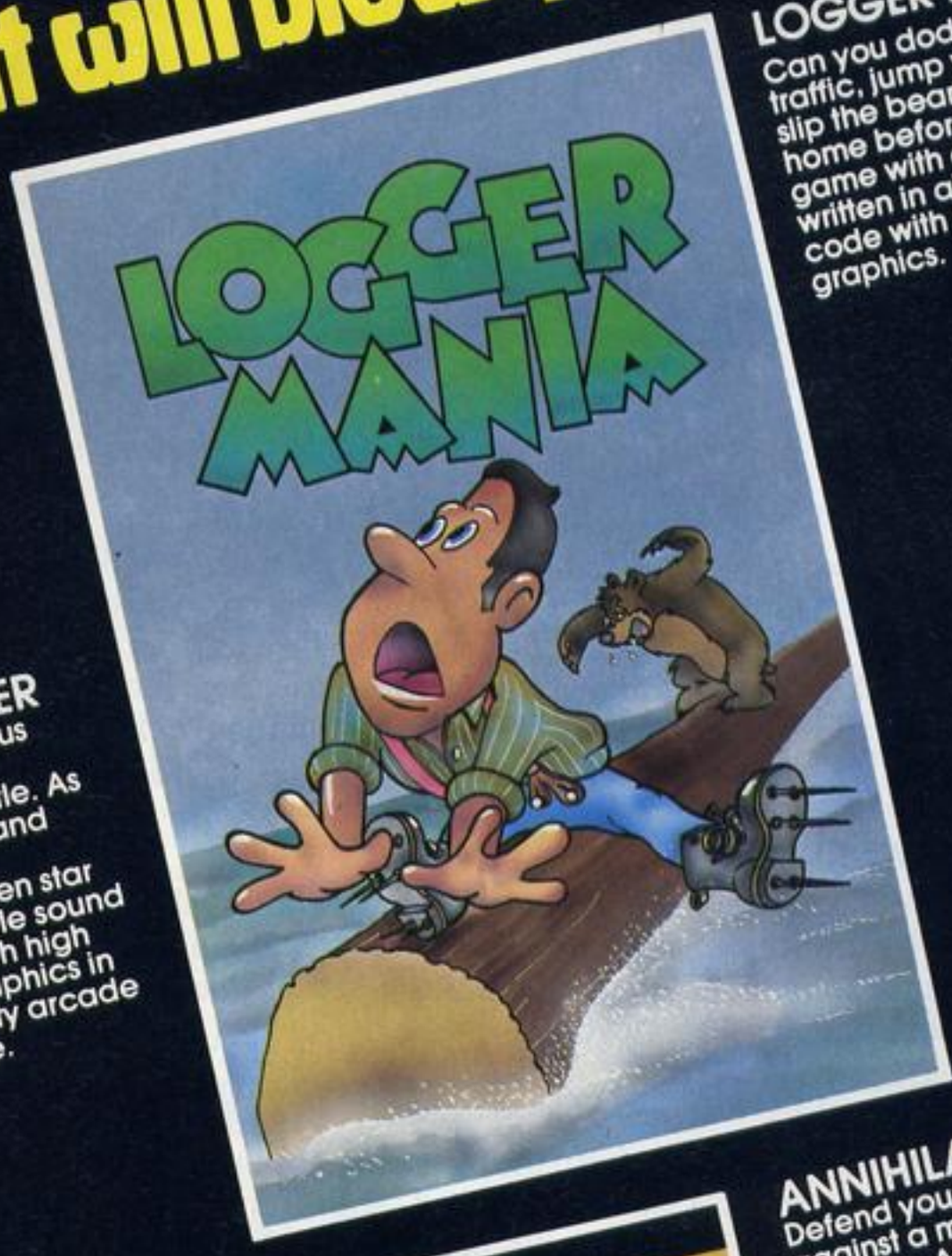
ATARI PROGRAM

```
10 REM Patience by R.L.Howarth,NOV'82
20 DIM A$(512),B$(36),B1$(40):GRAPHICS 0
25 B$(1)="♦":B$(36)="♦":B$(2)=B$:B$(1,3)
="♡♡♡":B$(34,36)="♡♡♡":B1$(1)="♡":B1$(40
)="♡":B1$(2)=B1$:POKE 559,62
30 I=PEEK(106)-16
40 POKE 54279,I:POKE 53256,1:POKE 53277,
3:UTAB=PEEK(134)+PEEK(135)*256:ATAB=PEEK
(140)+PEEK(141)*256
50 OFFS=I*256+1024-ATAB:HI=INT(OFFS/256)
:LO=OFFS-HI*256:POKE UTAB+2,LO:POKE UTAB
+3,HI
70 GOSUB 8000:GOSUB 8200:HI=85:GOTO 8100
80 U=N1:FOR T2=28 TO 49 STEP N3:FOR W=N3
 TO N1 STEP -N1:S(U)=P(T2+W):U=U+N1:NEXT
 W:NEXT T2
90 U=29:W=53:FOR T2=N1 TO 24:IF S(T2)=N0
 THEN W=W-N1:GOTO 95
93 P(U)=S(T2):U=U+N1
95 NEXT T2:IF W<53 THEN FOR I=W TO N52:P
(I)=N0:NEXT I
96 RETURN
200 ? #U$;"♦♦♦";SU$:RETURN
300 SUIT=N1:C=P(T):POSITION N13,19:IF T1
<N1 THEN ? " ":GOTO 320
310 ? T1;:IF T1<N10 THEN ? " ";
320 GOSUB 500:POSITION G,18:GOSUB 200:RE
TURN
400 FOR T=N1 TO N52:P(T)=T:NEXT T:FOR I=
N1 TO N52:R=INT(N52*RND(N0))+N1:A=P(I):P
(I)=P(R):P(R)=A:NEXT I:RETURN
500 SUIT=N1
505 IF C>N13 THEN C=C-N13:SUIT=SUIT+N1:G
OTO 505
510 NU$=STR$(C):IF C=N1 THEN NU$="A "
520 IF C>N10 THEN NU$="J ":IF C>N11 THEN
 NU$="Q ":IF C>N12 THEN NU$="K "
525 IF C<N10 THEN NU$(N2,N2)=" "
530 SU$="♣":IF SUIT>N1 THEN SU$="♦":IF S
UIT>N2 THEN SU$="♡":IF SUIT>N3 THEN SU$=
"♠"
540 RETURN
600 POSITION N14,N23:? "HOLE IN ONE":GU=
32:POKE 704,208:POKE DL+17,130
610 POKE 54286,192:POKE 709,N10:POKE 710
,196:POKE 712,230:POKE 1538,244:T=N1:G=2
3:FOR ROW=N0 TO N12 STEP N4
620 FOR I=N2 TO 32 STEP N5:POSITION I,RO
W:? CARD$:C=P(T):D(I+N3)/N5,(ROW+N4)/N4
-N1)=C:GOSUB 500
630 POSITION I+N1,ROW+N1:GOSUB 200
640 T=T+N1:NEXT I:NEXT ROW:T1=N23:T2=N0
650 POSITION N12,N17:? FD$:POSITION N22,
N17:? CARD$:Y=N34:Z=96:GOSUB 8050:GOSUB
 300
660 GOSUB 700:FOR I=N1 TO N10:NEXT I:GOT
O 660
700 ST=STICK(0):IF STRIG(N0)=N0 THEN POP
 :ON GM GOTO 810,2100,3100,4100,5100,610
0
701 IF PEEK(53279)=N6 THEN POP :GOTO 810
0
702 IF PEEK(53279)=N3 THEN POP :GOTO 812
0
703 IF ST=15 THEN 700
705 H=N0:U=N0:H=H+(ST=N7)-(ST=N11)+(ST=N
6)-(ST=N10)+(ST=N5)-(ST=9):Y1=Y:Z=Z+(H*2
0):POKE 77,N0
710 IF GM=N2 THEN 714
712 IF (ST=N14 OR ST=N6 OR ST=N10) AND Y
=170 THEN Y=N130:GOTO 720
714 IF (ST=N14 OR ST=N10 OR ST=N6) AND Y
<N34 THEN Y=Y-GU:IF GM=N3 AND Y=N130 THE
N Y=170
715 IF (ST=N13 OR ST=9 OR ST=N5) THEN Y=
Y+GU:IF Y>N130 AND GM<N4 THEN Y=170:A$(Y
1,Y1+40)=B1$:GOTO 722
720 A$(Y1,Y1+36)=B1$
722 IF GM=N3 OR GM>N4 THEN RETURN
723 IF Z>176 THEN Z=176
724 IF Z<N56 THEN Z=N56
726 IF Y<N34 THEN Y=N34
728 IF Y<N130 AND GM=N1 THEN Z=96
730 IF GM=N2 THEN RETURN
734 IF Y<162 AND GM<N3 THEN Y=162
740 A$(Y,Y+35)=B$:POKE 53248,Z:RETURN
810 IF Y>130 THEN PICK=N2:GOTO 870
820 A=INT(Z/20)-N1:R=INT(Y/32)-N1:IF D(A
,R)=N0 THEN 836
824 IF Y<128 THEN IF D(A,R+N1)<>N0 THEN
836
830 PICK=N1:S1=SUIT:C1=C:C=D(A,R):GOSUB
500:IF C1=C THEN 840
832 IF ((C1=C-N1) OR (C1=C+N1)) AND S1=S
UIT THEN 840
834 SUIT=S1:C=C1
836 GOSUB 1000:GOTO 660
840 TEMP=I:I=N4+(7*R):GOSUB 300:I=TEMP:D(
A,R)=N0:POSITION A*N5-N3,R*N4:? BLANK$:I
F Y<34 THEN POSITION A*N5-N3,R*N4:? "└─
┘"
845 T2=T2+N1:GOSUB 1100:IF T2=28 THEN PO
SITION N2,N22:? "YOU WON ";:GOSUB 1200:G
OTO 900
850 IF STRIG(N0)=N0 THEN 850
860 GOTO 660
870 T=T+N1:IF T>N52 THEN POSITION N2,N22
:? "DECK EMPTY ";:FOR I=N1 TO 200:NEXT I
:GOTO 900
880 IF T=N52 THEN POSITION N12,N17:? BLA
NK$
890 T1=T1-N1:GOSUB 300:GOSUB 1100
895 IF STRIG(N0)=N0 THEN 895
897 GOTO 660
900 POKE 764,255:? "} PLAY AGAIN Y/N";
910 GET #N1,W:IF W=78 THEN END
920 IF W<>89 THEN 910
930 ? " YES":? :GOTO 8100
1000 SOUND N0,255,N10,8:FOR I=N1 TO N52:
NEXT I:SOUND N0,N0,N0,N0:RETURN
1100 FOR I=N1 TO N2:SOUND N0,20*I*(PICK+
N1),N10,N4:SOUND N1,20*I*(PICK+N2),N10,N
4
1110 FOR W=N1 TO 8:NEXT W:NEXT I:SOUND N
0,N0,N0,N0:SOUND N1,N0,N0,N0:RETURN
1200 U=PEEK(709):FOR I=N0 TO N3:FOR W=N3
 TO N10 STEP 0.5:ON GM GOTO 1210,1212,12
14,1216,1218,1220
1210 SOUND I,200/(I+GM),N12,N12-W:NEXT W
:NEXT I:GOTO 1240
1212 SOUND I,240/(I+GM),N12,N12-W:NEXT W
:NEXT I:GOTO 1240
1214 SOUND I,N4*(I+GM),N2,N12-W:NEXT W:N
EXT I:GOTO 1240
1216 SOUND I,120*(I+GM),N10,N12-W:NEXT W
:NEXT I:GOTO 1240
1218 SOUND I,120/(I+GM),N12,N12-W:NEXT W
:NEXT I:GOTO 1240
1220 SOUND I,220/(I+GM),N10,N12-W:NEXT W
:NEXT I:GOTO 1240
1240 FOR I=N0 TO N3:POKE 709,16-I*I:FOR
W=N1 TO N10:SOUND I,(N10+I*GM),N12,N10-(
W*(GM=N6)):FOR A=N1 TO N3:NEXT A
1250 NEXT W:NEXT I:POKE 709,U:FOR I=N0 T
O N3:SOUND I,N0,N0,N0:NEXT I
1300 SOUND N0,N10,N0,N4:FOR W=N1 TO N5:N
EXT W:SOUND N0,N0,N0,N0:RETURN
```

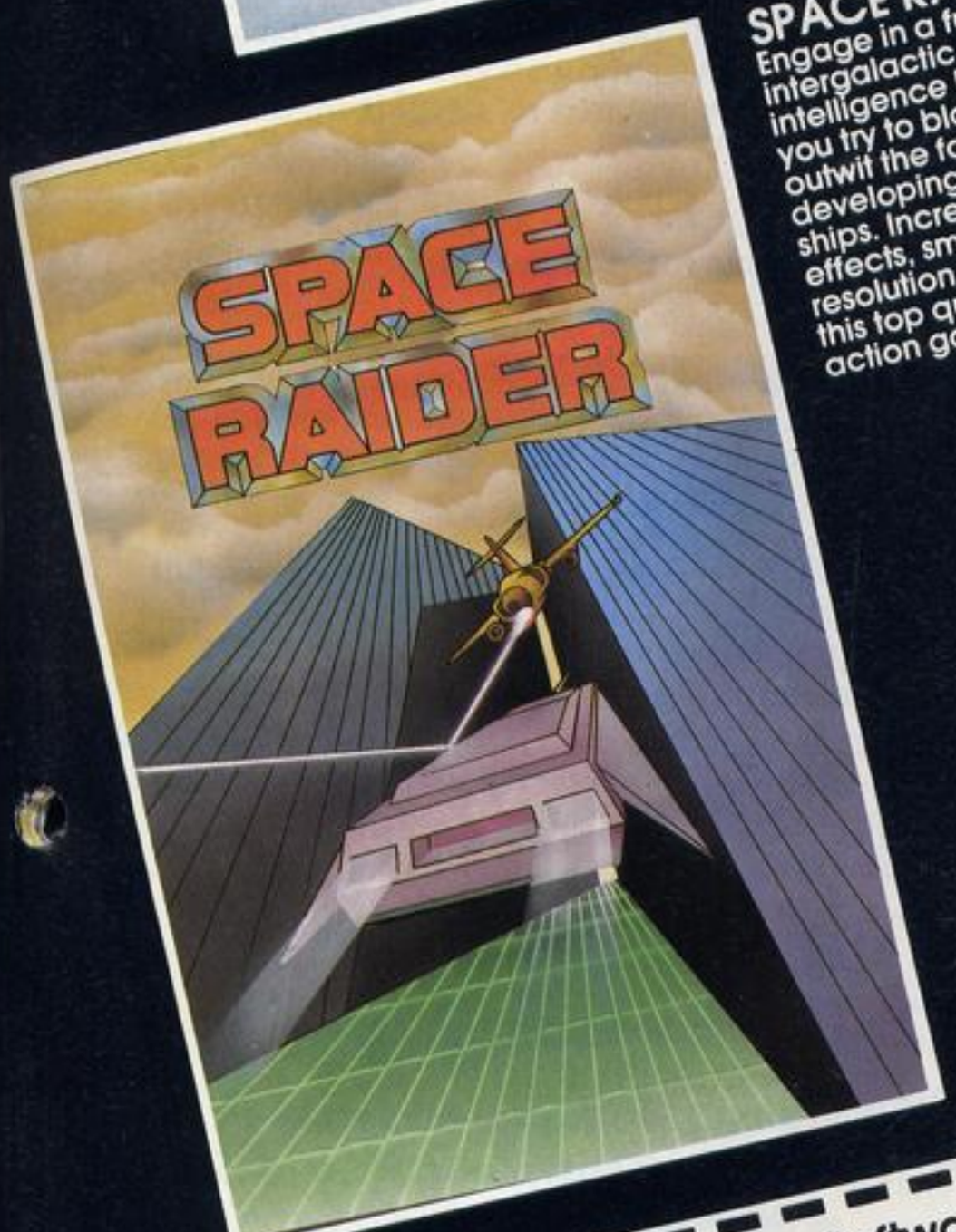
```
3000 N1=1:N0=N1-N1:N2=N1+N1:N3=N2+N1:N4=
N3+N1:N5=N4+N1:N6=N5+N1:N7=N6+N1:N10=N5*
N2:N11=N10+N1:N12=N10+N2
8005 N13=N12+N1:N14=N12+N2:N17=N12+N5:N2
2=N17+N5:N23=N22+N1:N34=N17*N2:N52=52:N5
6=56:N130=130
8010 PS=N0:DIM P(N52),SU$(N1),NU$(N2),D(
N7,N6),CARD$(40),BLANK$(40),FD$(40),S(25
):OPEN #N1,N4,N0,"K:":PICK=N1
8020 CARD$="┌──┐♦♦♦♦♦┐  ┌♦♦♦♦┐  ┌♦♦♦♦┐
  │♦♦♦♦└──┘":BLANK$="      ♦♦♦♦♦    ♦♦♦♦
    ♦♦♦♦♦    ♦♦♦♦♦
8030 FD$="┌──┐♦♦♦♦♦┐  ┌♦♦♦♦┐  ┌♦♦♦♦┐
  │♦♦♦♦└──┘"
8040 RETURN
8050 A$(1)="♡":A$(512)="♡":A$(2)=A$:GOSU
B 740:RETURN
8060 FOR I=N0 TO N7:FOR ROW=N0 TO N6:D(I
,ROW)=N0:NEXT ROW:NEXT I:RETURN
8100 GRAPHICS N1:POKE 711,12:POKE 559,62
:POKE 752,N1:POKE 710,116:POKE 712,116:P
OKE 53248,N0
8101 ? #N6;"──────────────────":? #N6
8102 POKE 764,255:GM=N0:? #N6;"    SELEC
T GAME"
8103 ? #N6:? #N6;"  ┌ HOLE IN ONE":? #N6
;"  ─ PACKET BOAT":? #N6;"  ♦ BLOCK ELEV
EN":? #N6;"  ● REVERSE PUZZLE"
8104 ? #N6;"  ▪ MONTE CARLO":? #6;"  ! P
OKER SOLITAIRE":? #6
8105 ? #N6;" during play press  option
-to restart          game":? #N6;"  star
t -to return          to menu"
8109 GET #N1,GM:L=GM+256:GM=GM-48:IF GM<
N1 OR GM>N6 THEN 8109
8110 POKE 704,N0:GOSUB 1100:POSITION N2,
N0:? #N6;"selected game ";CHR$(L):GOSUB
9000:GRAPHICS N0:POKE 752,N1
8120 ? "}":GOSUB 400:POKE 559,62:POKE 75
2,N1:ON GM GOTO 600,2000,3000,4000,5000,
6000
3200 GRAPHICS N0:POKE 82,N0:DL=PEEK(560)
+256*PEEK(561)+N4:POKE 752,N1:POKE 710,3
4:POKE 709,0:POKE 712,N0
8210 POKE 708,200:FOR I=N2 TO N11:POKE D
L+I,N5:NEXT I:FOR I=N12 TO 17:POKE DL+I,
N5:NEXT I
8220 POSITION N0,N2:? "XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXX";
8224 ? "<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>":POSITI
ON N0,9:? "<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<";
8226 POSITION N0,N10:? "XXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXX";:POSITION N3,N
12:? "BY r.l.howarth"
8230 FOR I=N0 TO 35 STEP N5:POSITION I,N
4:? CARD$:NEXT I:FOR I=N1 TO 36 STEP N5
8240 READ SU$:SOUND 0,ASC(SU$)-I,N10,N4:
SOUND N1,ASC(SU$)-I+N1,N10,N4:POSITION I
,N5:? SU$:FOR W=N1 TO N7:NEXT W
8250 POSITION I+N1,N7:? "♦":NEXT I:SOUND
 N0,N0,N0,N0:SOUND N1,N0,N0,N0:FOR I=N1
TO 70:NEXT I:POKE 82,N2
8260 RESTORE 8310:FOR I=N0 TO N10:READ C
:POKE 1536+I,C:NEXT I:POKE 512,N0:POKE 5
13,N6:RETURN
8300 DATA P,A,T,I,E,N,C,E
8310 DATA 72,169,22,141,10,212,141,24,20
8,104,64
9000 ? " DO YOU REQUIRE INSTRUCTIONS? Y/
N":?
9010 POKE 764,255:GET #N1,W:IF W=78 THEN
 10020
9020 IF W<>89 THEN 9010
9030 GRAPHICS N0:POKE 710,N4:POKE 559,62
:POKE 752,N1:ON GM GOTO 9100,9200,9300,9
400,9500,9600
9100 ? " 28 cards are dealt in seven col
umns. Only the bottom card of each colum
n isplayable.The cursor is used";
9110 ? " to select card. The object of t
his game is to  collect all the cards i
nto one pile.  One card is ";
9120 ? "dealt face up at the  bottom of
 the screen. On top of this  card you c
an put any playable ";
9130 ? "card  which has the same value,
or a card of  the same suit providing th
at it is  next in sequence";
9140 ? " to  the top card of the discard
 pile. If you cant go then  place the cu
rsor on the 'face down'  pack,";
9150 ? "and press the button to turn the
 next card":GOTO 10000
9200 ? " 28 cards are dealt in seven col
umns, only the bottom card of each colum
n isplayable ";
9210 ? "The object of the game is to col
lect packets of 4 cards of the same deno
mination.Cards can be played";
9220 ? " on  each other if they are sim
ilar, when  4 similar cards have been bro
ught  together,";
9230 ? " they are removed by placing th
e cursor on the bottom card and  press
ing the button. Cards are dealt";
9240 ? "  from the pack by placing curs
or on  pack and pressing button. A spa
ce can only  be filled by a card";
9250 ? " from the  discard pile. Pack
is redealt from  discards":GOTO 10000
9300 ? " 9 cards are dealt in a square,
 The object of the game is to get rid
of all the pack,";
9310 ? "by taking any 2 cards which add
to eleven. Picture cards  can only be
taken when Jack,Queen,King ";
9320 ? "are on the board at the same ti
e.  Spaces can be filled from the pack
by placing cursor on a space ";
9330 ? "and pressing button.":GOTO 10000
9400 ? " 20 Cards are dealt face up in a
 large square"
9410 ? " The object of the game is to en
d up  with the cards in the layout all f
ace down.";
9420 ? " Place the cursor over any card
 and press button to turn face down.":?
" Count this as 1."
9440 ? " Now move in a clockwise direct
on  counting 2,3,4. Turn the fourth ca
rd  face down. Choose ";
9450 ? "any other card,count 1 and turn
down.Turn down the fourth card and carry
 on turning 1 and 4 "
9460 ? "until all the cards are reversed
":GOTO 10000
9500 ? "25 Cards are dealt in a 5*5 layo
ut.Theobject of the game is to pair off
all the cards.A pair can only ";
9510 ? "be taken,if  they are next to ea
ch other in any  direction-":? " VERT
ICAL,HORIZONTAL or DIAGONAL."
9520 ? "Place cursor on card and press b
utton, It ";
9530 ? "you cant go,then place cursor on
 pack and press button,the cards in the
 layout  will be re-dealt ";
9540 ? "minus any  spaces.The layout wi
ll be increased to 25 cards from the dec
k":GOTO 10000
9600 ? "25 Cards are dealt from the stoc
k one by one.Place each card anywhere on
 a  5*5 grid to make the best ";
9610 ? "poker hands.Once laid,a card can
not be moved.":? "When the grid is fille
d,the score will be  calculated ";
9620 ? "for 10 hands-":? "  5 across,5 d
own and 2 diagonal.":? "The object being
 to get the best score possible"
10000 ? :? "PRESS START TO BEGIN"
10010 IF PEEK(53279)<>N6 THEN 10010
10020 GOSUB 1100:? "}":RETURN
```

SKI RUN
All the excitement and skill of the ski slopes with downhill, slalom and giant slalom. Put yourself to the test and record the fastest time! Nine levels of difficulty. High quality graphics and brilliant sound effects!!

Boom Software
It will blow your mind

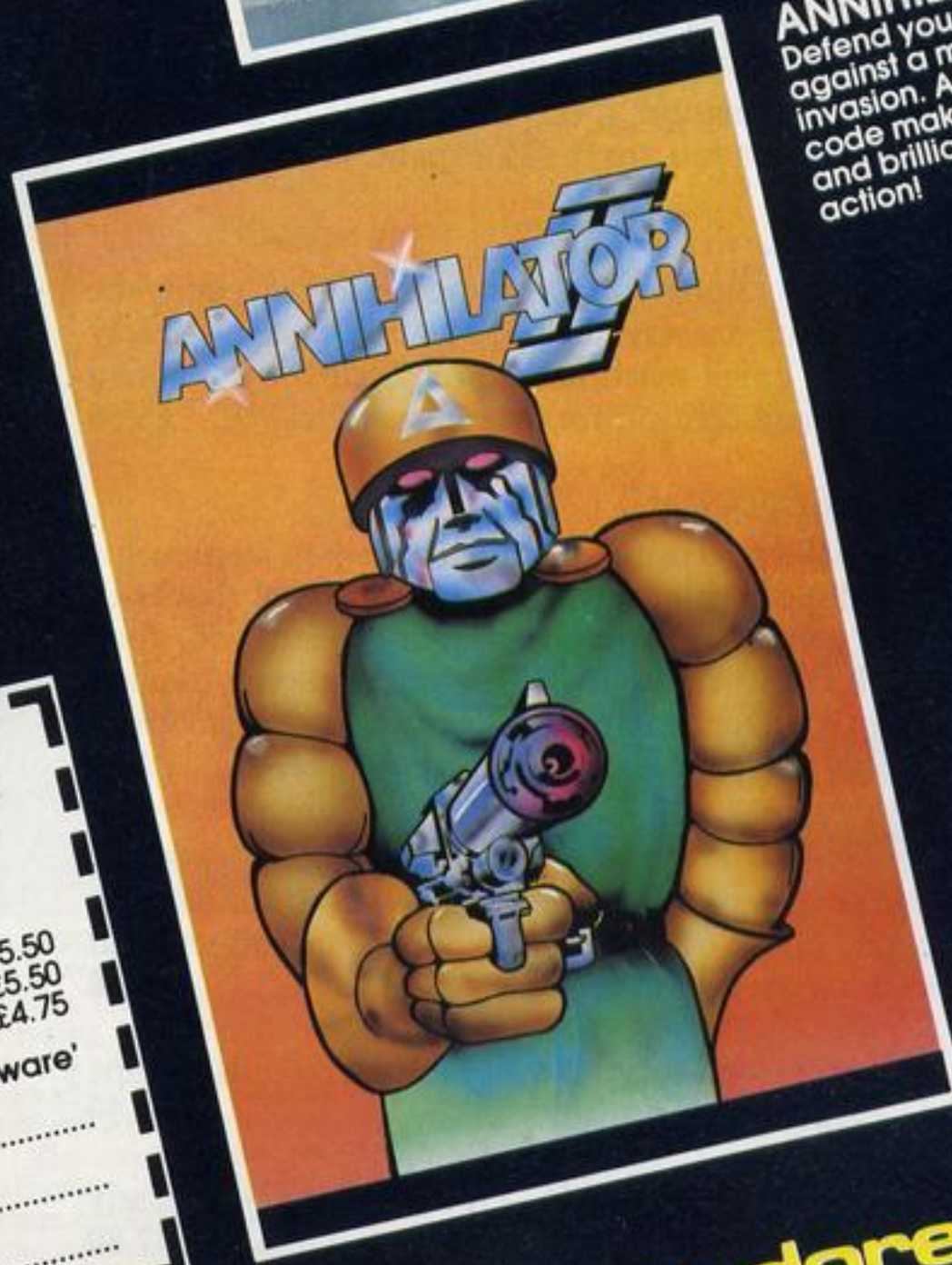


LOGGER MANIA
Can you dodge the traffic, jump your logs, slip the bears, and get home before sunset? A game with a difference written in all machine code with high quality graphics.



SPACE RAIDER
Engage in a furious intergalactic intelligence battle. As you try to blast and outwit the fast developing alien star ships. Incredible sound effects, smooth high resolution graphics in this top quality arcade action game.

ANNIHILATOR II
Defend your planet against a mighty allien invasion. All machine code makes for fast and brilliant arcade action!



Post this coupon now to Boom Software
2-4 Chichester Rents, Chancery Lane,
London WC2A 1EG

Please send me the following:

Ski Run	£5.50	Annihilator II	£5.50
Logger Mania	£5.50	Space Raider	£5.50
Annihilator II (VIC 20)	£4.75	Trek (VIC 20)	£4.75

Total cheque/PO enclosed £ ..... payable to 'Boom Software'

Name .....

Address .....

.....

commodore 64
and VIC 20

MR CHIP SOFTWARE

SPECTRUM GAMES

SPECTRUM DARTS (48K)

Five games of darts for 1-5 players, 501, Cricket, Killer, Round the board, Noughts and Crosses, four levels of play per game, take on the computer or friends at these games of skill and judgement **£5.50**

WH££LER DEALER

As for the Commodore 64, but now available for the 48K Spectrum, Texas TI99/4A and Dragon **£5.50**

VIC-20 GAMES AND UTILITIES

JACKPOT

This is it, the ultimate Fruit Machine for the VIC with nudge, hold and respin 100% machine code. "Overall Jackpot is a beautifully written simulation giving superb graphics, animation and use of colour. In fact, this program makes Commodore's Fruit Machine cartridge look unbelievably cheap and nasty." Home Computing Weekly No. 20 19/7/83 ..... **£5.50**

KWAZY KWAKS

Accuracy and speed are required for this Shooting Gallery, superb use of colour and graphics in this new and challenging game from the author of Jackpot. 100% machine code, joystick or keyboard control **£5.50**

PACMANIA

Choose your own game from the following options — difficulty 1-3 speed 1-3, size of maze 1-3, visible or invisible maze, still or moving power pills, define your own key controls, any combination, if this is your type of game, then this is the one for you, for the 3K expand VIC **£5.50**

SNAKE BYTE

Guide your ever hungry snake round the screen, eating the flies and wasps, to stay alive you must avoid the deadly mushrooms, quick reactions are required for this biting game, keyboard control, for the unexpanded VIC .. **£5.50**

BUGSY (Joystick Only)

This is a Minefield with a difference as you step on the stones whilst collecting purple boxes which give your both time and points, they disappear from beneath your feet. DO NOT DESPAIR! "BUGSY" will randomly replace the stones but avoid bumping into him or its sudden death! An original compulsive and challenging game **£5.50**

MINI-ROULETTE — PONTOON — HI-LOW

Three great games of chance for the VIC, try to beat the computer, hours of fun, full colour, sound effects and tunes **£5.50**

DATABASE — create your own files and records on tape **£7.50**

SUPER BANK MANAGER — A full feature version any memory size, but needs 3K expansion **£7.50**

COMMODORE 64 GAMES AND UTILITIES

WESTMINSTER

A game for up to four players, can you lead the party of your choice and win the general election, you tour the 60 constituencies (seats) buying votes, when you can, (just like the real thing), this must be one of the first board type games specially written for the computer. Why play on your own, have fun with your family and friends playing WESTMINSTER **£5.50**

WH££LER DEALER

A game for two to twenty players, become a tycoon of the motor trade, you must obtain gearboxes, tyres and engines to produce cars for sale. Form syndicates, buy and exchange parts, buy dealerships, but be careful, you may become bankrupt and have to liquidate, find out what you are made of, have you got what it takes to become a WH££LER DEALER **£5.50**

LUNAR RESCUE

Our new version, avoid the asteroid belt, to rescue the stranded scientists, then fight your way back to the mother ship, fast reactions are required to safely land and dock your lunar module **£5.50**

PONTOON — ROULETTE — ACE'S HIGH — More powerful versions, that make three great games of chance for the 64 ..... **£5.50**

CHIPMAN — Contains a one — or two pass Assembler, Disassembler and Monitor. A programming aid for the development of machine code programs and routines on the CBM 64 ..... **£12.50**

BANK MANAGER — As our Super Bank Manager, but for the 64 ..... **£7.50**
Now available on disc with added facilities **£10.00**

Full documentation with all utility programs.

Other software available for the VIC and Commodore 64, send for free brochure, including RABBIT SOFTWARE at **£5.50 each.**

Send Cheques/PO's to:

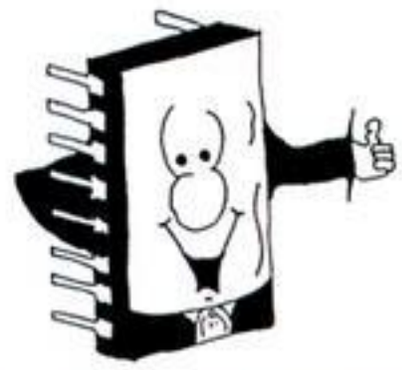
MR CHIP SOFTWARE

Dept PCWK, 1 NEVILLE PLACE,
LLANDUDNO,
GWYNEDD LL30 3BL. Tel: 0492 49747

Wanted: High quality software, of all types, for export and UK distrubition.

All programs now available on disc please allow £2.50 extra.

DEALER ENQUIRES WELCOME



How to get lost in space

Meanwhile, back in the outer reaches of the galaxy, the fight goes on . . . read our reviewers' reports

Space Caverns 32K BBC £6.95

Byteware, Unit 25, Handyside Arcade, Newcastle NE1 4PZ

The quality of home computer software has risen dramatically over the last year with the vast growth in the market for the products.

This means that games which would have been perfectly acceptable a year ago have to compete with games of a much higher standard today. This game is written to last year's standard, and unfortunately has little to recommend it now.

The aim of the game is to penetrate further and further into the caverns, using the Lunar Lander technique of thrust against gravity and directional movement in short bursts. The graphic screens are acceptable but in no way exceptional, and have one major problem.

When you finish one screen by thrusting off the right hand edge you arrive on the left hand of the next cavern. Unfortunately, though, there is no sideways scroll routine, so the screen blanks for a second or so while a new screen is drawn.

This means that you lose control at a time when it is needed, which can end the game prematurely.

Overall, most disappointing — a game to avoid. **D.C.**

instructions	50%
playability	10%
graphics	30%
value for money	10%

★

Outland/ Megafighter TI-99/4A plus MiniMemory, joysticks £17

By Roach Software, from Stainless Software, 10 Alstone Road, Stockport

Outland is an Asteroids clone which achieves its arcade quality of movement through sprites.

You can control your ship using the keyboard, rotating clock- and anti-clockwise, moving forward in the direction in which your ship is pointing, firing similarly, and there is also a shield which stops you from getting crunched but lets the asteroids push you around the screen at a rapid rate of knots.

Only one key can be acted upon at a time, but even no reasonably good control can be achieved. When you clear the screen of one batch of asteroids along come another crowd.

The running score is shown, but no record is kept of the highest to date — feasible because of the battery-backing of the module.

The second game, Megafighter, is a Berzerk-type game requiring joysticks and there is some awkwardness because of that alphalock key — it must be pressed to issue instructions for loading, but released to ensure the joystick works correctly. **P.B.**

instructions	60%
playability	90%
graphics	85%
value for money	75%

★ ★ ★ ★

Protector 48K Lynx £6.95

Sian Software, 139 Rosebery Avenue, Manor Park, London E12 6P7

This package consists of two programs. The first is an introduction, explaining the main rules of the game, and the second is the main program.

This starts by asking for the user's name and explaining the scoring.

The user then becomes commander of a protector ship with a mission to exterminate aliens from 10 sectors of space. The first task is a tedious space scan to detect the mother alien ship.

The game now begins by the mother ship attacking with four consecutive waves of different aliens. The protector ship, which can be moved from left to right using the arrow keys, must destroy the aliens by shooting darts from below.

Each alien destroyed from the first wave counts 10 points, from the second 20, 30 from the third and 40 from the fourth. Once all these aliens have been destroyed, the mother ship must be eliminated.

After refuelling and a further space scan the process is repeated until all 10 sectors of space are free of aliens. The score is displayed during the game and at the end is incorporated into an honours list.

Although the game may at first appear repetitive, it is well presented and challenging. **R.S.**

instructions	90%
playability	80%
graphics	85%
value for money	70%

★ ★ ★ ★

Planet Destroyer TI-99/4A £6

Stainless Software, 10 Alstone Road, Stockport

As the commander of the Starship Patscram, your mission is to guide your ship to the heart of the alien planet. You must steer your ship through twisting tunnels, avoiding or destroying the enemy missiles and refuelling as necessary.

There are 20 sectors to go through before your mission is complete. I have only mastered half of them, but this just adds to the excitement of this very good game.

Full instructions are given on an inlay card, and brief prompts are contained in the program. The graphics are very well presented and so is the sound which is generated while the game is in progress. The sound which accompanies the on-screen instructions is rather excessive, though.

On several occasions I have had trouble in loading the lengthy program but the error is at the beginning of the tape — the leader may be too long.

The program seems to be bug free with one exception. The refuelling instructions say fire your gun at the fuel dumps to refuel, but I have found that colliding with them has the same effect.

This game is well though out, and makes the most of TI BASIC and colour. **C.E.**

instructions	90%
playability	90%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

Spacefighter Pilot/Missile Man Jupiter Ace £5.95

Jupiter Cantab, Cheshunt Building, Bateman Street, Cambridge CB2 1LZ

The unexpanded Jupiter Ace has only about 1K of user RAM available for programs, but these two demonstrate convincingly what a lot can be done by a skilled programmer within this limitation.

Using a mixture of Forth and machine code, Spacefighter Pilot speeds off down a realistic runway into a flickering galaxy of stars.

Moving lines produce a most realistic sensation of motion until the jump into hyperspace, with a choice of two warp speeds, both good and fast.

There are the usual space noises for background, while a running total of missiles zapped or evaded is conspicuously signalled at the bottom of the screen.

The instructions are barely adequate, but the user will sort them out eventually, though if he can operate the one to shut off the space noises he'll do better than I did.

Missile Man has only one gun in this remarkably successful attempt to reproduce something of the traditional arcade space invaders game within the limits of monochrome 1K. **G.M.**

instructions	70%
playability	90%
graphics	95%
value for money	95%

★ ★ ★ ★ ★

TOP SAVINGS

PRINTERS – Also Available Seikosha, Oki, Star, Qume, Olivetti, TEC, Mannessman Tally.

		£
Epson	RX80	229
	RX80 F/T	256
	FX80 F/T	335
	FX100 F/T	430
Diablo	630 (RO)	1699
Smith Corona	TP1	299
Juki	6100	350
Ricoh	RP1300S	945
	RP1600S	1165
Brother	HR15	419

COMPUTERS

		£
Commodore	8096	735
	64	165
	1541	165
Epson	HX20	375
	QX10	1600
Spectrum	48	109

Prices exclude VAT. Next day insured delivery £10.
Monday to Friday 9.00 – 6.00.
Phone for stock availability and out of hours collection arrangements.

MAYFAIR MICROS
5th FLOOR 65 DUKE STREET LONDON W1 Telephone 629 2487

AT LAST...
A FULLY COMPUTER COMPATIBLE
Cassette Recorder
at a realistic price.

ONLY **£24.99** Free Postage

- *THIS RECORDER IS DESIGNED SPECIFICALLY FOR COMPUTER USE*
- *TESTED + GUARANTEED FULLY COMPATIBLE WITH:*

☐ SPECTRUM ☐ ZX81 ☐ BBC ☐ ELECTRON
☐ DRAGON ☐ LYNX ☐ SHARP ☐ ORIC
☐ APPLE ☐ TEXAS ☐ TANDY ☐ GENIE

FEATURES:
- *DIGITAL COUNTER*
- *JACK AND DIN CONNECTIONS*
- *BATTERY/MAINS OPERATION*
- *SLIMLINE STYLING*

NEW! **COMMODORE CASSETTE INTERFACE!**

- Now you can use your VIC/CBM 64 with most standard cassettte recorders.
- Full Computer Control.
- Comes complete with all necessary leads etc.
- Simply plug in.

ONLY **£14.99** Post Free

Trade Enquiries Welcome

Send Now for Instant Despatch or Tel 24HR Credit Card Line

DATEL ELECTRONICS
27 HOPE STREET, HANLEY, STOKE-ON-TRENT
TEL: 0782 273815

New Low Prices

SPECIAL OFFER
available to 30th November or whilst stocks last.

SPECTRUM GAMES 16 or 48K

Jet Pac	£4.99	☐
Cyber Rats	£5.50	☐
Black Hole	£4.99	☐
Invaders	£4.50	☐
PSSST	£4.99	☐
Slippery Sid	£5.50	☐
Tranzam	£4.99	☐
Planet of Death	£6.50	☐
Jumping Jack	£4.99	☐
Light Cycles	£4.50	☐
Violent Universe	£4.99	☐
Cookie	£4.99	☐
E.T.X.	£5.50	☐
Arcadia	£4.99	☐
Nightflite	£5.50	☐
3D Tunnel	£5.50	☐

48K only

Hobbit	£13.99	☐
Mad Martha	£6.50	☐
Penetrator	£6.50	☐
3D Combat Zone	£5.50	☐

IMPORTANT
Your discount vouchers are still valid. Existing customers can now save up to £1 a game.

NEW! THE ZX PRINTOUT BINDER
Special introductory offer: 1st 200 at only **£4.99** plus £1.00 postage and packing. A smart 4 ringed red leatherette binder custom built for your printouts. Complete with 5 heavy gauge clear PVC sleeves. Additional sleeves in packs of 10 at £2.99 plus 50p postage and packing.

Binder ☐ **Sleeves** ☐

See us at the 9th ZX Microfair.

Send cheques or P/O's to (no stamp needed):
K-ram,
Freepost,
Rainham,
Essex RM13 7BR

Name.....
Address .....
.....
HCW35

k-ram

YAHTCEE....This traditional dice is for one or more players and features superb graphics to enhance your enjoyment.

YAHTCEE is Fascinating, Absorbing & Challenging.

SPECIAL OFFER

Order YAHTCEE Today for only £7.95 incl and get a ten game cassette FREE

ANIK
30 KINGSCROFT COURT, BELLINGE, NORTHAMPTON

TICK BOX FOR YOUR REQUIREMENT: COMM64/SPECTRUM48/DRAGON32
HCW35
YAHTCEE ☐
NAME
ADDRESS
TOTAL ITEM ENCLOSED

Games to give you a new direction

So you think you know your way about? These maze games could be for you. But first, read our reviewers' ratings

Spook 64 Commodore 64 £7.95

Byteware, Unit 25, Handyside Arcade, Newcastle-upon-Tyne NE1 4PZ

Another Pacman clone. The thing that goes around eating all the dots is there in all his glory, the dots are there, the power pills are there, and the proverbial ghosts are there ready to eat you. All that's missing is the fruit.

Having said that, the maze is much simpler than in the original, and I think that's a big mistake — it gives you less places to hide from the spooks, though there is a tunnel.

The spooks move faster than the Pacman, which can cause problems in a straight chase. The power pills work in the same fashion as the Atari version, and the spooks can be got — but they always get revenge.

Graphics are good — a straight reproduction of the original — but the sound is hopeless, amounting to a few feeble clicks when you eat a dot and a few beeps when you eat a power pill.

There is a joystick option, so all movement is from the keyboard, and the response could be a lot better.

Overall, though, this is a pretty faithful reproduction of the original. **M.R.**

instructions	70%
playability	80%
graphics	90%
value for money	70%

★ ★ ★ ★

Sultan's Maze Dragon £6.95

Gem Software, 22 Prestwick Drive, Bishop's Stortford, Herts CM23 5ES

Your task is to search a maze to find and collect six jewels stolen from the Sultan. However, these are protected by the demented Sultan's ex-bodyguard who attacks everyone in sight.

Every action depletes your energy and, at best, you can easily carry two jewels at a time to the exit. There are nine options at each move, you can jump the inner hedges or look at the map for a few moments.

The displays for both maze and map are clear and easily understood. The maze is well constructed in 3D perspective which is redrawn after a few seconds delay — very good for a BASIC program. Colours are green, yellow and blue and are used well, sound is limited but effective.

Instructions are only supplied on screen and are well written and comprehensive, but I would have liked a copy on the insert.

The game is enjoyable to play, it provides a challenge to players who enjoy a thoughful exercise, but it will probably be too slow for those who prefer arcade action.

Loading presented no problems and 10 difficulty levels are offered. It took me quite a while at level one, the easiest. This is a game which, though not addictive, I will play occasionally. **R.E**

instructions	70%
playability	80%
graphics	76%
value for money	70%

★ ★ ★

Mazeman Lynx 48K £4.95

Abersoft, 7 Maes Afallen, Bow Street, Dyfed SY24 5BA

This machine-coded game is fast, well designed and enjoyable to play. It can be operated by the Camputers joysticks or by using the arrow keys.

The maze displayed on the screen is divided into squares, and the aim of the game is for a Mazeman to collect these squares by passing through them. Each square is worth ten points.

However, also in the maze are found Hobgoblin monsters searching for the Mazeman to gobble him up.

The Mazeman can counter attack by passing through one of four special squares. These give him about 10 seconds to slay as many of the monsters as possible, so enabling him to pass through more squares before other hobgoblins are released from the central cage.

Notwithstanding its simplicity, this game is very challenging and addictive. One soon begins to hate the hobgoblins, constantly trying to avoid them with manic fervour.

Improvements could have been made to the game by having more variations built into the program — such as different levels of difficulty — and by having more sound effects during the different operations.

But considering all these factors and the price, Mazeman is a good buy. **R.S.**

instructions	85%
playability	85%
graphics	80%
value for money	95%

★ ★ ★ ★ ★

Labyrinth Lynx 48K £4.75

Quazar Computing, 17 Teg Close, Portslade, Sussex BN4 2GZ

Loading this tape proved to be very difficult, but in the end the effort was well worth while. The aim of this game is to find the quickest way through a maze. At the start there is the option of seeing its plan with the position of the player and the exit clearly marked.

The player can be moved in all directions through the maze by the use of the arrow keys while the screen displays a three-dimensional view from the player's position inside the maze. This has been accomplished simply but ingeniously by line drawings.

If the arrow keys are pressed quickly the different images of the maze also change quickly, so creating a feeling of running through the maze.

At any time the user feels hopelessly lost, pressing H will display the plan with the latest position.

Once the exit has been found you are told how many moves it took to escape and how many times help was required.

The last amusing surprise of this program is the display of the progress through the maze. Although this game needs a little more refining it is still an excellent and imaginative production. **R.S.**

instructions	80%
playability	85%
graphics	95%
value for money	90%

★ ★ ★ ★

Corridors of Genon 48K Spectrum £5.95

New Generation Software, Freepost, Bath, BA2 4TD

Way back in the annuls of Sinclairology, this company produced a classic for the ZX81 called 3D Monster Maze. Many variations of the 3D theme followed, but this time they have produced a variation which is just as brilliant.

The maze in this program is circular and has doors which open and close. The beastie is a Bogul which drains your mental power and you have to reach the centre, deactivate the computer (a mastermind-type exercise) and escape.

The 3D effect is achieved by perspective and should not be confused with the latest 3D via red and blue glasses. Nevertheless, it is a superb program graphically and a well-conceived plot.

Sound is very effective — those footsteps really spur you on.

The cassette insert is colourful and contains full instructions plus scenario. Also supplied is a keyboard overlay, and the program loaded easily. Control is via the cursor keys, with a special section converted to a numeric keypad.

You can practice your computer deactivating skill or choose to play the full game at one of three levels and at one of three speeds. **R.E.**

instructions	92%
playability	97%
graphics	98%
value for money	100%

★ ★ ★ ★ ★

Silverlind

SILVERLIND LTD. 156 Newton Road, Burton-on-Trent
Staffs. DE15 0TR. Tel (0283) 63987

NEW

MASTER DIET PLANNER 48K Spectrum **£11.95**
The ultimate in diet programs, the MASTER DIET PLANNER contains details of calories, protein, vitamins and other nutrients for 681 foods! The MASTER DIET PLANNER will help you plan a well-balanced diet, including options to restrict fats, cholesterol and salt, or to increase fibre intake - at the same time offering maximum choice of foods. Instructions and Recipe Book included.

ENJOY MATHS 48K Spectrum **£8.00**
A suite of 4 highly motivating programs for the 8 - 14 age range: tables, simple equations, polygons and areas. The programs combine explanation with tests and make good use of colour and sound.

TOWNTEST BBC/B **£6.50**
A very useful aid for teaching Geography in primary schools, this program tests pupils' knowledge of the locations of major towns and cities in England, Scotland and Wales. Well presented, with a high-resolution map.

BIOLOGY BBC/B **£12.50**
A suite of programs using text, animated diagrams, examples, and questions to assist in the understanding of Biology to CSE, 'O' and 'A' Level standards. Most suited to individual use by students, these programs also contain material teachers can extract for classroom demonstration. Topics covered include the Eye, Ear, Heart, Blood and Circulation, Skeleton, Female reproduction, Genetics, Biochemistry and the Central Nervous System.

ALL PRICES INCLUDE POST & PACKING & VAT

Christine Computing

TI-99/4A colour computer	**£104.95**
Compatible cassette recorder	£24.98
Single cassette interface lead	£4.35
Dual cassette interface lead	£5.45
Recorder + single lead	£28.75
Recorder + dual lead	£29.75
Computer + recorder + single lead	**£133.50**

Software Cartridge —		Extended Basic	£51.50
Minimemory	£51.50	Parsec	£23.50
Chess	£29.50	Invades	£17.00

Software Tape — Core!, Blast It, Spudz, Code Break/3D Maze, U.F.O. all @ £3.50 each.

All prices inclusive, send 50p (refundable on 1st order) for full list, Cheques or PO's to:

6 Florance Close, Watford, Herts WD2 6AS.
Tel: 09273 72941

TI99/4A SOFTWARE

PILOT £5.95

A great new flight simulation game for the unexpanded TI99/4A. Graphics display of landing strip and terrain map, plus updated instrument panel. Options for take-off, landing or in flight. Full instructions included. Graphics and sound.

TEXAS PROGRAM BOOK £5.95

35 programs for the unexpanded TI99/4A, including 3D Maze, Lunar Lander, Caterpillar, Horse Race, Invader, Morse Code, Arithmetic, Alien Attack, Organ, Evasion and many more.

Send cheque or P.O. or telephone with Access/Visa for immediate despatch. Please add 50p p&p to orders under £7. Orders over £7 post free.

APEX SOFTWARE
Swiss Cottage, Hastings Road,
St. Leonards-on-Sea, TN38 8EA
Tel: Hastings (0424) 51175

THE ΩMEGA RUN

. . . . is coming

BRICKY
Armed only with your trusty trowel, brick in the creatures gobbling up your air.
48K Oric-1

FUNGOIDS
Defend your allies from the deadly, carnivorous Fungoids.
Dragon 32 48K Oric-1

Dynamic, real time arcade action.

100% machine code games with full colour and sound.

All cassettes £7.50 inc. VAT and postage

Available from dealers or direct by mail order from:

Breakpoint Limited

Manor Buildings, 2 Manor Row, Bradford, West Yorkshire BD1 4HJ

COMPETITION

Spot the difference — win a Microdrive or

New Generation Software

You could win a Spectrum Microdrive, plus interface, in this free, easy to enter competition from Home Computing Weekly and New Generation Software.

And that's not all. There are 100 more prizes of two great games of your choice.

The prizes

First prize is a Spectrum Microdrive, plus Interface 1, which allows fast loading of programs from tiny tape cartridges. Prize value: just under £80.

The other 100 prizes are your choice of any two of the New Generation games named below. But you must remember to write on the coupon the code letters of the games you would like. These code letters are in brackets after the names.

The **Spectrum** games are:

- Escape **(E)** — a fascinating maze game set in prehistoric times. Armed with an axe, you have to fight off the Triceratops and the flying Pteranodon.
- 3D Tunnel **(T)** — even if you manage to avoid bats, spiders, toads and rats, there's a London Transport tube train bearing down on you.
- Knot in 3D **(K)** — a fast-moving arcade game in which you have to escape the chasers...and your own trail.
- Corridors of Genon **(C)** — bend your mind as you attempt to track down the computer that rules the universe. But watch out for Bogul.

Games for the **16K ZX81:**

- 3D Monster Maze **(M)** — Tyrannosaurus Rex is on your trail as you struggle to find a way out.
- 3D Defender **(D)** — a super-fast space game in which your mission is to defend your planet against aliens.

How to enter

Study the two cartoons: there are several differences between the two. Circle the differences — in ballpoint pen — on the right-hand cartoon.

Then fill in your name, full address and the number of differences you found. And don't forget to write in the code letters of the two New Generation games you would like.

Then cut around the broken lines, seal the drawing with coupon attached in an envelope — and write clearly on the back of the envelope the number of differences you found.

Post your entry to New Generation Competition, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE.

Entries close at first post on Friday November 18. The winner of the main prize will be the first correct entry opened. And the 100 software winners will be the next 100 correct entries opened.

You may enter as many times as you wish, but all entries must be on the official coupon — copies will not be accepted — and in separate envelopes.

The solution and the names of the winners will be published in the news columns of Home Computing Weekly and the prizes will arrive from New Generation within 28 days of the publication date of that issue.

The rules

The first prize winner will be the first correct entry opened after the closing date, first post on Friday November 18, 1983. The other 100 prizes will go to entrants with the next 100 correct entries opened.

Coupons which are not fully completed and envelopes without the number of differences found on the back will not be considered.

Entries will not be accepted from employees of Argus Specialist Publications, New Generation Software and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.

The winners' names and and solution will appear in Home Computing Weekly. The editor's decision is final and no correspondence will be entered into.

New Generation Competition

Entry Coupon

Name .....

Address .....

.....

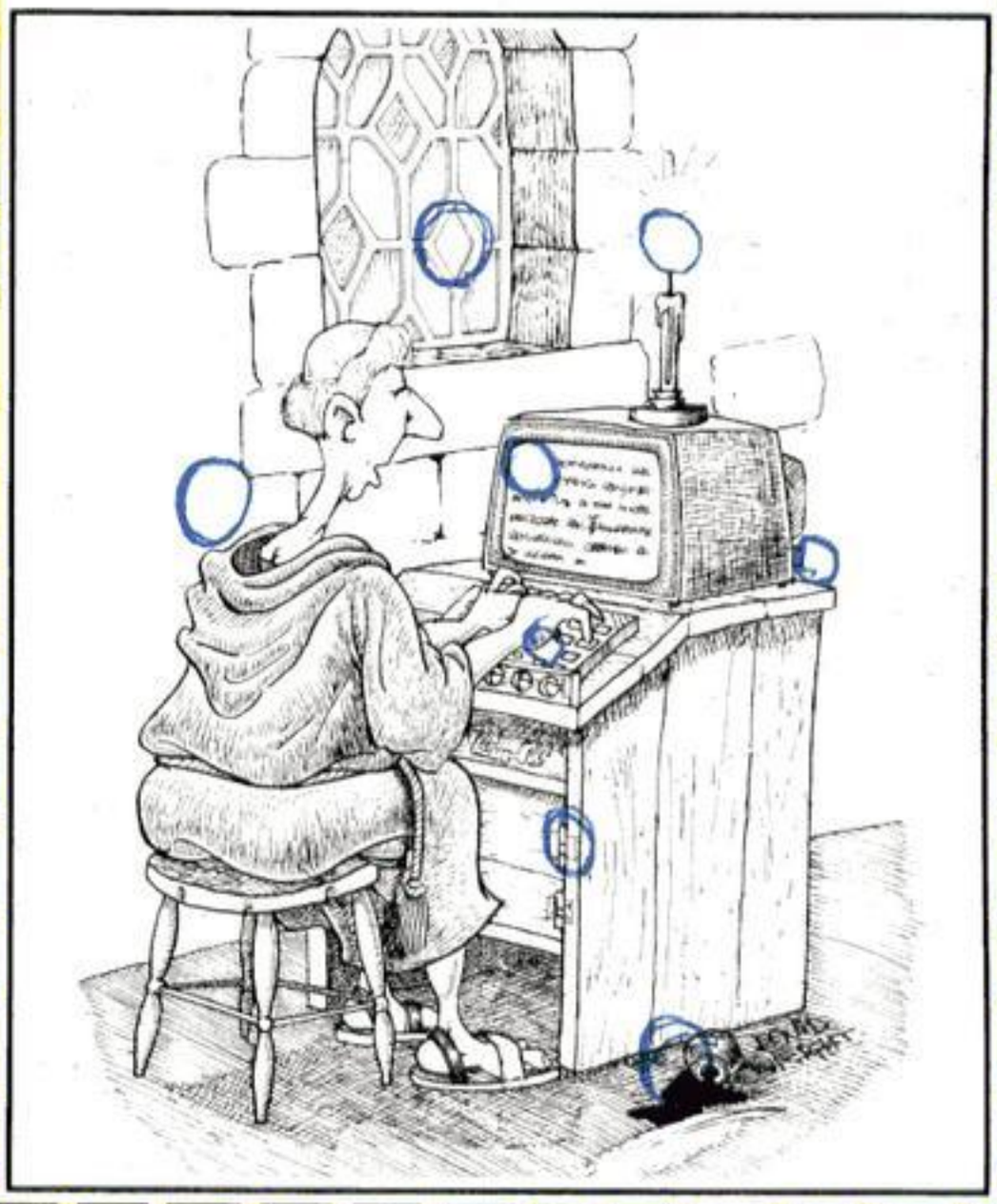
.....

..... **post code** .....

Number of differences found: .....

Code letters of two games .....

Post to New Generation Competition, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Closing date: Friday November 18.



HAVE YOU BEEN INVOLVED IN A MYSTERIOUS ADVENTURE RECENTLY?

If so, it is quite probable that you are presently suffering from TIS, more commonly known as Total Involvem Syndrome.

TIS manifests itself in a number of ways, one of the most dramatic symptoms being a victim's complete inability to fe at ease in the world of reality. Other symptoms include insomnia, a desparate need to play a Mysterious Adventure, a an overwhelming sense of acute enjoyment.

Experts believe that TIS is usually contracted as a result of prolonged exposure to Mysterious Adventures, this commonly caused by owning any of the foilowing Home Computers:-

48K SPECTRUM, BBC MODEL A OR B, TRS80, COLOUR GENIE, ATARI 400/800, COMMODORE 64, DRAGON 32, 1 ZX81, LYNX etc.

When questioned about this epidemic, a representative of DIGITAL FANTASIA, a company who are actively involved research and development work on Mysterious Adventures said, "There is probably no cure for TIS other than mu failure, faulty RAM chips etc. which can be at best only a Temporary solution". "In the absence of a more permane cure, I would advise TIS sufferers to submit to the Syndrome and obtain Mysterious Adventures from any sourc available to them". "TIS is highly contagious and in view of the current Worldwide Epidemic, I would say enjoy it wh you can, resistance is futile".

If you have a BBC Computer, Commodore 64, 48K Spectrum, Atari 400/800, or Dragon 32 you can obtain Mysterio Adventures in any of the following dosages:-

1) THE GOLDEN BATON
2) THE TIME MACHINE
3) ARROW OF DEATH (PART 1)
4) ARROW OF DEATH (PART 2)
5) ESCAPE FROM PULSAR 7
6) CIRCUS
7) FEASIBILITY EXPERIMENT
8) THE WIZARD AKYRZ
9) PERSEUS AND ANDROMEDA
10) TEN LITTLE INDIANS

Each Dose costs £9.95 including V.A.T. and Postage. Excellent quantity Discounts are available for Pushers.

D.F. MENTAL HEALTH WARNINGS. MYSTERIOUS ADVENTURES CAN SERIOUSLY DAMAGE YOUR SENSE OF REALI

For BBC, 48K Spectrum order from:-

DIGITAL FANTASIA

24 NORBRECK ROAD, NORBRECK, BLACKPOOL, LANCASHIRE, ENGLAND FY5 1RP. TEL. (0253) 591402

BARCLAYCARD VISA

For Atari, Commodore 64, Dragon 32 order from:-

CHANNEL 8 SOFTWA

51 FISHERGATE, PRES LANCASHIRE, ENGLAND. TEL. (0772) 5

Mysterious Adventures

WHAT ARE MYSTERIOUS ADVENTURES?

MYSTERIOUS: (Adjective):– "Baffling, full of mystery, strange or unaccountable".

ADVENTURE: (Noun):– "An enterprise full of risk or danger, an experience of unforeseen events endangering the participants life, a gamble on failure or success".

To start play on a MYSTERIOUS ADVENTURE is to take a step out of the world of reality and into the world of dreams. Your computer is your guide on these fantastic journeys in time and space where danger is ever present and solutions to problems seldom come easy.

By typing in simple commands in plain English you can "talk" to your computerised guide and tell it what your next actions are to be.

MYSTERIOUS ADVENTURES bring a frightening reality to the surreal situations in which you will find yourself. You will become involved in these strange worlds of the imagination, you will feel anger when things seem to be moving against you, you will feel elated when you overcome obstacles that are set in your way. Eventually you will feel overjoyed as you reach the climax of your mission and success is yours.

Any MYSTERIOUS ADVENTURE is not a mission to be taken lightly, success will never be instant – just as Rome was not built in a day, so each Adventure can rarely be completed in one session. To this end a "SAVE GAME" feature has been incorporated in each of the Adventures. This means that at any given time during play of an Adventure, you can store on tape your precise whereabouts, your equipment carried, and any other pertinent details about your present status.

NEW DEVELOPMENTS ON MYSTERIOUS ADVENTURES

Over the past few years, Adventure programs on Computers have almost always been presented in the classic "Text only" mode. For most Adventure players this has indeed been the way they prefer to play Adventures. The mental imagery generated by such an approach is limited only by the player's own imagination. One of the main reasons for the "Text only" approach has been the lack of hardware capabilities with regard to Graphics resolution – Pictorial Adventures could at best be only very limited in scope.

This situation is changing now however, and Brian Howarth, author of the MYSTERIOUS ADVENTURES series, has spent many hours incorporating Graphics into the Adventures. By working in close conjunction with Jon Blacow, a professional Artist, Brian has produced a series of extremely vivid and imaginative Adventures. Each MYSTERIOUS ADVENTURE now features, in addition to the Text description, pictorial "views" of your current location and surroundings. As you enter each new location, a high resolution, colour picture is rapidly drawn. The effect of this is to bring much more reality to the Scenario, you can actually see the situation you are faced with and act accordingly. It must be stressed that each picture has been designed so that it will enhance, rather than conflict with your mental imagery. At the single stroke of a key, you can erase the picture and carry on with your Adventure in text only if this is your preference. We are confident that no other Adventure programs can boast such breathtaking realism and imagination combined with the flexibility and ease of play that have made MYSTERIOUS ADVENTURES such a phenomenal worldwide success.

In addition, the Adventures now features full sentence decoding as standard. These mean that you are no longer restricted to inputting single or two-word commands. You can now type in whole sentences in more or less plain English. Your computer will quickly analyse the sentence and perform a whole string of your commands. Just another feature designed to maximise your enjoyment of these world beating games!

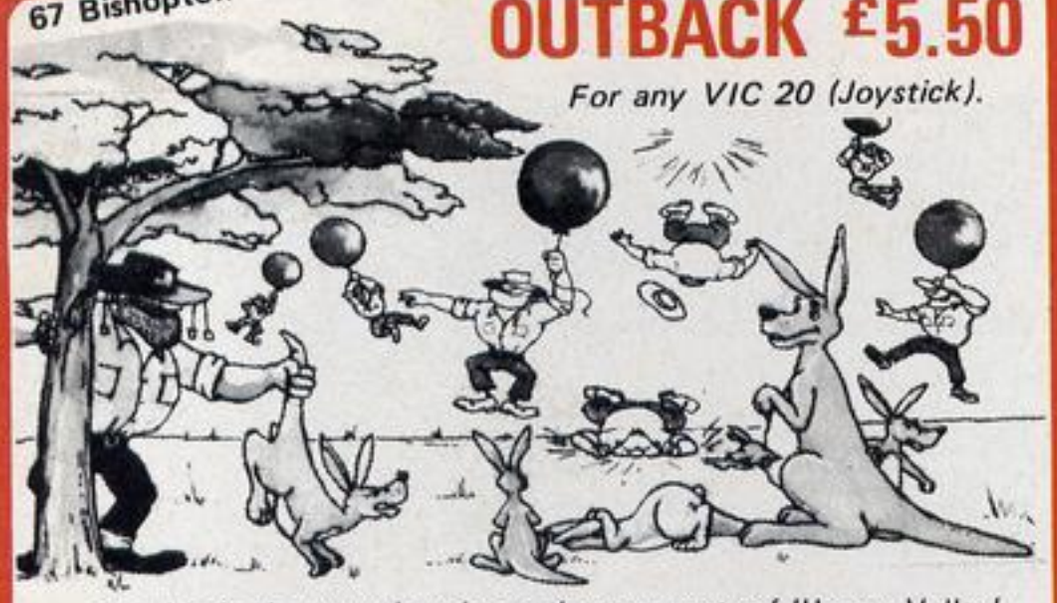
The "New style" MYSTERIOUS ADVENTURES are currently available for the 48K SPECTRUM, COMMODORE 64. More releases are planned this year which will include DRAGON 32, ORIC-1, APPLE II & IIe, ATARI, LYNX, MATTEL AQUARIUS, IBM PC etc. Please write or phone for availability.

PARAMOUNT SOFTWARE

67 Bishopton Lane, Stockton, Cleveland.

OUTBACK £5.50

For any VIC 20 (Joystick).



Trouble is about to drop in on the occupants of 'Hoppy Valley' in the form of rather cunning swagmen. 'Ma Hoppy' has a very sophistocated defence set-up and , with your help, could win the day. Which is it to be– a tranquil Hoppy Valley or a swagmen takeover? How long will you survive? It gets tough and hot in the OUTBACK.

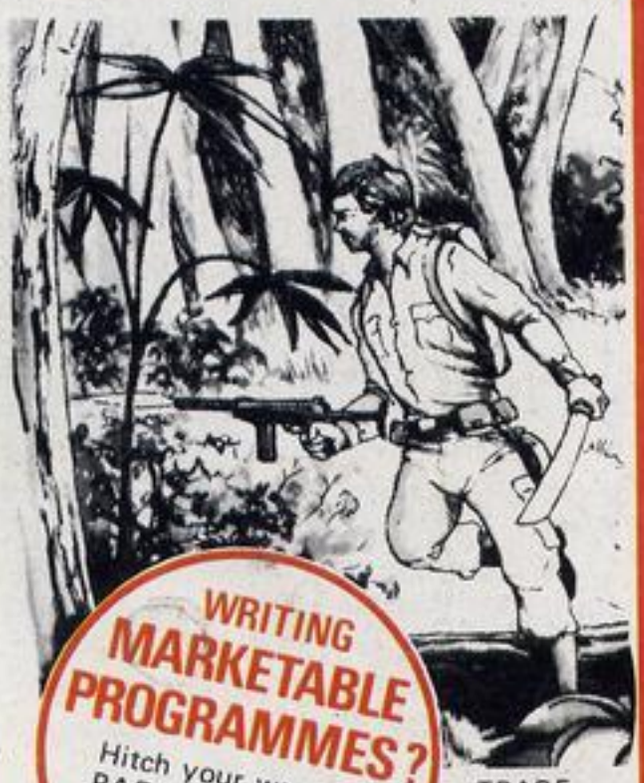
Pure Machine Code action. A game which pulls out all the stops on the VIC 20 to give you a deceptively aggressive and addictive challenge. It's a laugh too!

**5 skill levels. *6 Bonus Score symbols. *2 Bonus Life levels. *Running score on screen. *Hi Score display. *Superb Sound with 3 different tunes. *Extensive use of colour and graphics.*

COUNTDOWN £5.50

For VIC 20. 8K or 16K expansion – Joystick or Keyboard.

``our next assignment is to assist the government of a friendly power in averting a holocaust. TIME is important. ACCURACY is essential. COURAGE mandatory. But, above all, NERVE is the prime attribute needed for your mission as an agent in the crack S.M.U.



**Multi Skill/Time levels.*
**On Screen score display.*
**Bonus for each screen.*
**'Mission Accomplished' Bonus.*
**Bonus Life feature.*
**Hall of Fame.*
**Realistic Sound Effects.*
**Superb use of Colour and Graphics.*
**Keyboard or Joystick option.*

PARAMOUNT is a registered trading name of Workstations Ltd.

WRITING MARKETABLE PROGRAMMES? Hitch your wagon to PARAMOUNT. Send for evaluation and terms.

TRADE ENQUIRIES Tel. 0642 604470

To: PARAMOUNT SOFTWARE, 67 BISHOPTON LANE, STOCKTON, CLEVELAND, T518 1PU. (ENGLAND)

Please supply .....'Outback' at £5.50 each
..... 'Countdown' at £5.50 each

Name.....
Address.....
.....
.....Post Code.....
I enclose cash/cheque/P.O. for £.....

(Overseas orders add £1.50 for airmail.) HCW35

DON'T JUST TAKE OUR WORD FOR IT!

SUMLOCK MICROWARE SUPERB SOFTWARE FOR THE VIC 20

SP.04 GRIDTRAP Defuse the bombs, watch out for the mines and wandering boot. Joystick or Keyboard M/code **£7.95**

SP.01 SKRAMBLE Destroy the enemy installations and missiles in their underground silo. Joystick or keyboard M/code **£7.95**

SP.02 JUMPIN JACK Cross a busy road and treacherous river to get Jack home. Joystick or keyboard. Multi-colour Hi-Res Gr. M/code. **£7.95**

SP.03 TRIAD Defend your base against the suicidle fleets of alien hoverships. Joystick or keyboard. M/code. **£7.95**

SP.15 SCORPION Destroy the poisonous cacti and deadly scorpions to survive. Joystick or keyboard. M/code. **£7.95**

SP.16 MULTITRON The biggest alien encounter of all time. Wave after wave of invasion action. Joystick or keyboard M/code **£7.95**

SP.06 ASTRO FIGHTERS A space duel played by two players at once. Requires Joystick. M/code **£6.95**

SP.07 CHOPPER Attack and destroy the enemy base but watch out for guided missiles. Joystick or keyboard M/code. **£6.95**

SP.08 DESTROYER Battle against Sea Air attack with the destroyer H.M.S. Victory. Joystick not required. M/code. **£7.95**

SP.9 GUNFIGHT Duel with a deadly hombre in a western shootout play the computer or 2nd player. Joystick or keyboard M/code. **£6.95**

SP. 10 SPACE RESCUE Pilot your rescue craft through the asteroid belt and save the stranded crew. Joystick or keyboard. M/code. **£6.95**

SP.13 STARSHIP ESCAPE A compelling and exciting real time graphic space adventure game. Joystick or keyboard M/code. **£9.95**

SP.12 PUZZLE PACK A compendium of six intriguing puzzles and games for all the family. **£6.95**

SP.14 DATA PACK A three program data file handling utility package and combined educational quiz. **£8.95**

... AND THE COMMODORE 64

LW01 SKRAMBLE Enhanced features. Hi-res graphics. Sprite graphics. Synthysound. 2 Player option. Pixel plot graphics. Screen scroll. **£8.95**

LW02 JUMPIN JACK Enhanced features. Hi-res multi-colour graphics. Sprite graphics. Synthysound. 2 Player option. Lady Frog. Crocodiles etc. **£8.95**

LW03 TRIAD Hi-res graphics. Sprite graphics. Synthysound. Pixel plot graphics. 2 Player and game level option. **£8.95**

LW04 GRIDTRAP Hi-res graphics. Sprite graphics. Synthysound etc. **£8.95**

SEND FOR YOUR SUMLOCK MICROWARE NOW! OR FOR A FREE BROCHURE AND YOUR NEAREST DEALER INFORMATION

☎ 061 834 4233

SUMLOCK MICROWARE

198 Deansgate, Manchester, M3 3NE. Dept. HCW

PROFILE

Confessions of an old whizz-kid

Candice Goodwin heard how a car-repairer and a double-glazing salesman became directors of dk'tronics

One of the problems of making it in the software business is that you no longer have time to write programs. Don Priestley had gone home for a peaceful afternoon's programming on dk'tronics forthcoming "all-singing, all-dancing animated picture puzzle", away from the interruptions of the office.

Don Pristley — an evening class started him on a new career

No sooner had he sat down at the keyboard than HCW interrupted him. It would never have happened in the early days.

dk'tronics started life in a back bedroom in Great Yarmouth. David Heelas, dk'tronics' managing director, used to make ZX80 and ZX81 add-ons and memory expansion units in the time he had to spare from running a one-man car repair business. Gradually, the demand for add-ons grew, and the computer business started to take over from the car repairs.

In 1981, David Heelas became aware that though computer add-ons sold well, the demand for software was even greater. He'd written a couple of ZX81 programs himself, and started to commission software from freelance software writers. And that was how he met up with Don Priestley.

David Priestly had been a teacher until, as he remembers it, "one happy day in 1975 I just stopped." He did various odd jobs, including selling double glazing door to door, then finally got interested in computing after a computer evening class he attended, "to show willing", with his son. He invested £100 of his unemployment money in a ZX81, in kit form, and a RAMpack, and started to write programs.

David Heelas — his software business developed from selling ZX81 add-ons

One of his early ZX81 programs was Mazogs. Bug-Byte got that one, but dk'tronics was one of the companies in the bidding, and Don subsequently wrote several ZX81 and Spectrum programs for David Heelas, including 3D Tanx and Dictator. "I didn't even see him for nine months, because I was living in Lancaster and he was in Great Yarmouth", Don recalls. "We actually met for the first time at a ZX Microfair in September 1982."

That Microfair also marked dk'tronics' entry into chain store sales. Don recalled: "This bloke came along and started asking questions about 3D Tanx, and he turned out to be from Smiths. The number of tapes he wanted for his first order — 4,000 — came to more than all the tapes we'd then sold by mail order."

By then, David Heelas had a business that was growing almost in spite of himself. "He's first andforemost an entrepreneur rather than a businessman", according to Don, "but he was told that his business would have to be put on a firm footing." So he decided to move from Great Yarmouth to the rather less inaccessible Saffron Walden, and asked Don to move down from Lancaster and join him full time.

Don is now software director, supervising dk'tronics' two in-house programmers Andy French and Paul Johnson, as well as 20 or so outside programmers. Though he describes himself as "the wrong side of 40 — a sort of old whizz kid", Don reckons that on the whole, young means good as far as games programming is concerned. "Young people do tend to be better. We've got a 15-year-old programmer who can do a program conversion in about a week."

He also has to take care of program evaluation. "We get about four programs a day to evaluate. It's the middle-of-the-road ones that take the most time."

Though dk'tronics now has 46 software titles, for the Spectrum, BBC, Commodore 64, Atari and VIC-20, about half the titles are for the Spectrum. But the company is bringing out some of its Spectrum best-sellers, like 3D Tanx and Dictator, for the BBC and Commodore 64 too. And Don says that dk'tronics has got "a first" for all the machines but the Atari. "It's a puzzle called Slicker which is as simple but as complex as the Rubik's Cube."

Now dk'tronics is looking around for the next computer to back with a software support, but it's not an easy decision. "It's a chicken and egg situation", Don says.

"Machines have failed because of lack of software support, but on the other hand we don't want to write software for a machine that isn't a good seller. We've approached manufacturers and manufacturers have approached us, but we're still making our minds up — it'll take a major commitment."

Programmers Andy French

. . . and Paul Johnson

HOME COMPUTING WEEKLY CLASSIFIED

Lineage:
35p per word

Semi display: £6.00 per single column centimetre
Ring for information on series bookings/discounts.

All advertisements in this section must be prepaid.
Advertisements are accepted subject to the terms and conditions printed on the advertisement rate card (available on request).

01-437 1002
EXT 211.

Send your requirements to:
Debra Stupple
ASP LTD.
145 Charing Cross Road,
London WC2H 0EE

ACCESSORIES

COMPUTER ADDICTS. At last, a purpose built trolley for the home computer and accessories. So convenient to keep your equipment safe, tidy and ready for use on a mobile unit. How have you managed without one. Solid wood frame recessed upper & lower shelves. Prices from £18.25 + p&p 55p. Send now for further information to Setcraft, Sussex Ltd, 32 Walpole Ave, Worthing, Sussex BN12 4PL. SAE appreciated.

VIC-20/CBM 64
FOUR SLOT SWITCHABLE MOTHERBOARDS
£18.95 inc p&p
VIC-20 RAM ADAPTOR
Turn your extra memory on and off at the flick of a switch £12.45 inc p&p
L. W. STAINES & CO., UNIT 2, RODING TRADING ESTATE, LONDON ROAD, BARKING, ESSEX. TEL: 01-591 2900

CLUBS

Software Exchange. Swap your used software. Free club membership. £1 per swap. sae for details UK SEC, (HCW), 15 Tunwell Greave, Sheffield, S5 9GB.

RED SQUARE . Answers to the name of Neil Kinnock. – Denis

FOR HIRE

To Hire a Computer from ZX81 upwards, ring or write to: Business and Computer Services, 292 Caledonian Rd., N1 1AB. Tel: 01-607 0157.

Oric Software Library. Two weeks hire £1. Annual Membership £5. Stamp for list. Les Wilson, Penallick, Tintagel, Cornwall.

VIC-20 SOFTWARE HIRE
All the **LATEST TITLES, FREE MEMBERSHIP,** all charges just 60p per week. Send a large S.A.E. for your membership package to
VIC-20 SOFT—HIRE, 12 CLIPSTONE AVENUE, NR PEEL STREET, NOTTINGHAM.
N.B. Manufacturers Permission included

ECLIPSE SOFTWEAR
—SPECTRUM LIBRARY—
Hire for up to Four Weeks at competitive rates. Send name, address and 70p (refundable on first tape hire) for details and catalogue.
Eclipse Software, 24 Cliffe Park Drive, Leeds LS12 4XG, Yorkshire.

RECRUITMENT & COURSES

4 Lee High Road
Lewisham
London SE13 5LQ
COMPUTER WORKSHOP
MAKE THE MOST OF YOUR MICRO
15 Hour Courses
Junior £35.00 + VAT
Adult £45.00 + VAT
Try Out, Starter, Advanced Business, Home Computing, Details:
Ring 01-318 5488.

5D SOFTWARE
Program Writers Co-operative
Hempland Cottage, N. Lopham
Diss, Norfolk

★ **PROGRAMMERS:** Our Author-Members not only receive 70% of income from their published software, also there are many other benefits in joining us. Send us a copy of your latest work and tell us about yourself. (Any Popular Micro). Copyrights fully respected.

★ **MICRO-OWNERS.** We write and distribute good quality, original software at sensible prices, not expensive psychedelic packaging. Why not send for our lists (Give details of your system).

FOR SALE

ATARI all action 16K game — Bunny Run, Avoid Ferret, Fox etc. While collecting carrots. Fun for all, £3, 9 Kippilaw Drive, Dalkeith, Scotland.

DATA DYNAMICS 390 TELETYPE with integral tape reader and Punch working order £50. 19 rolls paper tape £10. 11 rolls printer paper £10. (0202) 874496.

SERVICES

DO YOU OFFER A SERVICE PEOPLE IN COMPUTING REQUIRE? IF SO WHY NOT TELL THEM ABOUT IT? RING 01-437 1002 EXT 211. TO APPEAR IN THE SERVICES SECTION.

ALL YOUR CASSETTE NEEDS
Blank cassettes C15 with case, 40p each.
Labels in Blue, White or Yellow, 20 for 36p. Inlay cards in Blue, Red or Yellow 20 for 60p. Library cases, 9p each.
Postage on each complete order 55p.
Stonehorn Ltd, (HCW), 59 Mayfield Way, Barwell, Leicester LE9 8BL.

PROGRAM DUPLICATION
QUALITY CASSETTES, ANY LENGTH
ANY QUALITY
PROOF TAPE BEFORE RUN
LABEL AND INLAY SERVICE
SENTINEL • PAUL • PENZANCE
Tel: 0736 731246

SOFTWARE APPLICATIONS

STOP! LOOK! LISTEN!
STOP searching for a TOP QUALITY back-up copier for the SPECTRUM (16/48K).
"TAPE COPIER"
we are certain is the MOST ADVANCED package available. Does any other copier
LOOK at ONLY SOME of its options:
★ Copies up to approximately 47.7K (15.7K for 16K Spectrum).
★ Verifies, Repeat Copies, Auto, Abort, and STOPS programs.
★ Loads CONTINUOUSLY (not just one part at a time like most copiers) even without pressing a key!
★ Copies HEADERLESS and ALL programs that we are aware of!
★ Very user friendly and simple to use.
LISTEN to this. We are so convinced you will be delighted with our product that we can offer a FULL MONEY BACK GUARANTEE if not fully satisfied. Cost ONLY **£4.49.**
LERM, Dept HC16 Stonepit Drive, Cottingham, Market Harborough, Leics.

SPECTRUM KOPYKAT
IMPROVED PERFORMANCE
Simply the best. Copying **any** program is now as easy as LOADing and SAVEing your own programs. **Any ZX Spectrum** program can be backed-up onto a fresh tape. Even programs that cannot be stopped can now be copied. 100 per cent machine code. Prints file names. Copies headerless files. SPECTRUM KOPYKAT uses no program area so **full size** programs **over** 41.7K (9K for 16K machines) can be copied. PLUS FREE Header Reader program.
Despatched by first class return of post.
Send cheque/PO for £4.95 to:
MEDSOFT
61 Ardeen Road, Doncaster, South Yorks DN2 5ER.
IT CAN EVEN COPY ITSELF

SHOWER. Blue Cabinet complete with Ministers. Never been wet. Denis

VIC IMITATOR
Copies virtually all VIC-20 cassette based programs, including basic machine code, multipart programs and programs using various protection techniques. Written in machine code. Easy to use works on any memory size. For a quick delivery, send Cheques/POs for £6 to:
IAN WAITE, DEPT HCW
11 Hazlebarrow Road, Sheffield S8 8AU.

SOFTWARE BUSINESS

TI-99/44A for Business/ Student Use
BAR GRAPH (EXTENDED BASIC)
★ Enter up to ten 12 element bar graphs
★ Grand total & percentage display
★ Auto scaling & ranging
★ Data can be saved on cassette
★ Up to 21 different displays
FILE HANDLING (EXTENDED BASIC)
★ Up to 100 cards on cassette file
★ Up to 4 user named sections per card
★ Search & sort routine
★ Add or delete cards
★ Can be used as appointment reg. or maintenance log.
Available by post only
£6 each or £10 for both
Cheques to: **B Jackson, 21 Rowan Way, New Balderton, Newark, Notts NG24 3AY**

SOFTWARE GAMES

SPECTRUM PROGRAMS
Gnasher £4.95, Arcadian £4.95, Escape £4.95, Backgammon £5.95.
All 16K and many more. Crossed cheques/PO's to: VYAJYS HK or SAE. For full list to VYAJYS HK, 11 Margaret Avenue, St. Austell, Cornwall.

ALLIGATORS. Yours for an arm and a leg. More reptiles to follow. Denis

Computer games, discount prices. Free catalogue. Send s.a.e. to: A. D. Software, 17 West Street, Wath Upon Dearne, Rotherham S63 7BR. Tel: Rotherham 877115.

ALL THE BEST GAMES
For Spectrum, ZX81, VIC-20, Dragon, Oric and . . . We specialise in Commodore 64. Send for Free list stating your machine to: Panda Programs, PO Box 2, South Shields, Tyne & Wear. NE33 1EY.

8TH DAY ADVENTURE

DARK LORE IS A DYNAMIC NEW TEXT ADVENTURE GAME with over 100 locations, and many problems to solve on your journey.
Can you find the sacred talisman, pit your wits against insurmountable problems, and face many perils in your bid to confront the Dark Lord? Have you the courage to do battle with a host of awesome creatures, gamble your final reserves of money, seek a sea passage, soar boldly through the sky, all in a desperate struggle for good to triumph over unspeakable evil? Dark Lore is the epic adventure to play for the 48K ZX Spectrum. Send £6.95 to: **8TH DAY SOFTWARE, 18 FLAXHILL, MORETON, WIRRAL, MERSEYSIDE L46 7UH.**

CBM64 Software now available. Also Spectrum, Dragon, VIC-20, BBC, Oric. Catalogue from JBS, 49 Whymark Avenue, London N22 6DJ.

FREEZER. Upright monetarist. Noisy, expensive and doesn't work.. Denis

LANTERN SOFTWARE TI99/4A

Discover our range of arcade games and utilities. High quality software at New Low Prices.
Daddie's Hot Rod £5.95 Troll King £5.95
Runner on Treiton £5.95
NEW !! Builder/Minefield – Two great games for youngsters – £4.95
The Black Tower – from the author of Troll King – £5.95
Hunchback Havock – 24 sheets of action – unequalled in speed and graphics – simply the best – £5.95
For a full list of these, our Ext-Basic range and more send S.A.E. to: **4 Haffenden Road, Tenterden Kent TN30 6QD.**

ORIC XMAS !

ORIC 1 48k Micro-computer	£139.95
Quickshot Joystick & Cable	£ 24.95
IJK Xenon 1 48k	£ 7.50
Kenema Ass. Othello 48k	£ 5.50

Prices Inc. VAT & P&P. SAE for full lists.
Phildata, 8, Richmond Terrace, Pudsey, W. Yorks., LS28 9BY.
ACCESS Orders. Telephone (0532) 578851

PAULSOFT T199/4A

Present Value Pack 1 – 7 programs £4.95. Also multi-quiz – 2 cassettes £6.95. Further details S.A.E. – 70, WOOD ROAD CHADDESDEN, DERBY.

SELL YOUR PROGRAMS QUICKLY AND EASILY RING 01-437 1002 EXT 211

TIRED OF YOUR COMPUTER? WHY NOT SELL IT *AND* BUY A NEW ONE WITH A MINIMAL AMOUNT OF EFFORT USING ONE INDEX FINGER. RING 01-437 1002 EXT 213. AND SELL THE WEEK AFTER.

USER GROUPS

ORIC-1 OWNERS

Tangerine created Oric-1, now T.U.G. creates the rest. An independant users group with a solid reputation for progressive system support. Monthly news letters, meetings, software, hardware reviews. Advise and lots more. We have a proven record of performance on our system. Join T.U.G. you'll like us, We Do! Send £1 plus S.A.E. (A4) for sample newsletter and details.

Tangerine Users Group,
1 Marlborough Drive,
Worle, Avon BS22 0DQ.

VICTORIAN VALUES. At today's prices. Can you afford them? Denis

TI99/4A. Yahtzee free. Details only when you join nationwide group. S.A.E. TI-users, 40 Barrhill, Brighton, BN1 8UF.

WANTED

Cartridges wanted. Good prices paid for Atari, VCS, 400/800, Intellivision, VIC-20, etc. Write only. L. Sutherland, 14 Middlefield Crescent, Aberdeen. AB2 2PW.

XMAS GIFTS

Micro-Users SOFTWEAR T-SHIRTS and SWEATSHIRTS

1 Apple	**6 I'm User Friendly**
2 Spectrum	**7 Have you seen my**
3 Oric 1	**Peripherals?**
4 Epson	**8 Z80A**
5 Invader	**9 6502**

100% Cotton T-shirts in white, red or sky £3.25 each inclusive.
Poly-cotton Sweatshirts in white or grey £5.50 each inclusive, small, medium, large and extra large sizes.
Mail Order only from:
One Per Cent Screens, Unit 12, Star Lane Estate, Great Wakering, Essex.

FENCE . As sat on by Cyril Smith. Denis

BUY OR SELL HARDWARE THROUGH H.C.W. H.WARE SECTION. IF YOU'VE ALREADY BOUGHT WHY NOT ADD-ON? MAKE SURE YOU APPEAR IN THE RIGHT SECTION. RING 01-437 1002 EXT 213.

CLASSIFIED ADVERTISEMENT — ORDER FORM

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.
13.	14.	15.

PREFERRED CLASSIFICATION

Please place my advert in Home Computing Weekly for weeks.
Please indicate number of insertions required.

Advertise nationally for only 35p per word (minimum charge 15 words).
Simply print your message in the coupon and send with your cheque or postal order made payable to Argus Specialist Publications Ltd to:

CLASSIFIED DEPT., HOME COMPUTING WEEKLY,
145 Charing Cross Rd., London WC2H 0EE.
Tel: 01-437 1002.

Name .....
Address .....
.....
.....
Tel. No. (Day) .....

VISA

NATIONWIDE SHOPS & DEALERS

CORNWALL

FAL-SOFT COMPUTERS

8 St. Georges Arcade, Falmouth, Cornwall. Tel: 0326 314663.
We are stockists of BBC, Sinclair, Commodore, Dragon, Oric, Colour Genie, MPS-2 and Comex-35.

DEVON

WEST DEVON ELECTRONICS

15 Station Road, Horrabridge. Tel: Yelverton (0822) 853434

Dragon and Genie – Service and repairs
Dragon 32 £174 (inc. VAT)
Colour Genie £169 (inc. VAT)
OKI Microline 80 Printer £245 (inc. VAT)
4 colour printer/plotter £169 (inc. VAT)
Dragon 184K disc drive £274 (inc. VAT)

Send for lists & sample print outs. Free postage: W. Devon Electronics, 15 Station Road, Horrabridge. Open some evenings in addition to normal opening hours.

ESSEX

BBC ★
SPECTRUM ★ TEXAS
Extensive range of software/hardware/books always in stock.
ESTUARY SOFTWARE PRODUCTS
261, Victoria Avenue, SOUTHEND, Essex. Tel: 0702 43568.

KENT

ROCHESTER SOFTWARE & COMPUTER CENTRE

Open 9.30am-5.30pm
Monday to Saturday
½ day Thursday

All makes of computers, books and software.
Access/Barclay Card welcome at:
38, Delce Road, Rochester, Kent.
Tel: 0634 408305.

LONDON

ARMCHAIR ACTION COMPUTERS
BEAT THESE PRICES

VIC-20 KIT £135
Commodore 64 £198
Commodore 1541 Disc Drive £209
Spectrum 16K £97. Spectrum 48K £127
Large range of software available for any of the above machines plus Oric, Dragon & BBC.
Open Monday – Saturday 10am – 5.40pm (5 pm Wednesday)
Contact Armchair Action at: **41 Drayton Green Road, Ealing, London W13 (next to West Ealing Station). Tel: 01-567 1944**

SOFT MACHINE

A large selection of the very best software, books and some accessories available for ZX81, Spectrum, BBC, Dragon, VIC-20 and Commodore-64 microcomputers at:
3 Station Crescent, Westcombe Park, London SE3.
Tel: 01-305 0521, or send SAE for free catalogue (state which computer).

LANCASHIRE

LEIGH COLOUR LABORATORY LTD.
87 Chapel St, LEIGH, Lancs.
Tel: Leigh (0942) 607661

Open: Monday – Friday 9.00 – 5.30 and most Saturdays 10.00 – 4.00.

– Be Wise, Use The Specialists –

STAFFS

Computerama – The Midlands Home Computer Specialists

FOR BBC, SPECTRUM & ALL LEADING MICRO'S
STAFFORD: 59 FOREGATE ST
TEL: 0785 41899
STOKE-ON-TRENT:
MARKET SQUARE ARCADE
TEL: 0782 268620

COMPUTER CABIN
24 The Parade, Silverdale, Newcastle
Tel. 0782 636911
Official dealers for Commodore, Sinclair, & Acorn. BBC service and information centre
Huge range of hardware and software backed up by sophisticated service department

SOMERSET

PHOENIX SOFTWARE CENTRE
Software for Atari, BBC, Dragon, Oric-1, Spectrum, Com. 64 & Vic 20
All Hardware available
Open Mon-Sat. 9am-6pm
VISAS accepted
88 Huish, Yeovil, Somerset
Tel (0935) 21724

SUSSEX

Sussex Computer Centre
39 High Street
LITTLEHAMPTON
West Sussex Tel: 5674
We are stockists of Sinclair, VIC, Atari, Dragon, Oric, Lynx, Sharp, Colour Genie and Texas Instruments.
Members of Spectrum Discount Group.

SCOTLAND

THE GAMES SHOP AND COMPUTER SOFTWARE CENTRE TEL NO. 0224-643740
3 Waverley Place, Aberdeen AB1 1XH.
Stockists of Spectrum, Dragon, VIC-20 and Commodore 64 software. Extensive selection of books and magazines.

Tomorrows World
LERWICK, SHETLAND
Tel: 0595 2145
Software, Books, Accessories Service
BBC Micro, Dragon-32, ZX81, Spectrum, VIC-20, CBM-64
Open Mon-Sat 9.30am-5.30pm

SURREY

COMPUTASOLVE LTD
8 Central Parade, St. Marks Hill, Surbiton, Surrey KT6 4PJ.
Tel: 01-390 5135.
Open 9.30-18.30 Mon-Sat
Over 600 different software titles in stock. We are pleased to demonstrate any program before you buy.
We stock all leading home micro's

SHEENSOFT
Top Name Software at Rock Bottom Prices.
All Imagine Tapes at £4.75
Manic Miner at £4.95
Send cash with order or SAE For full list.
All callers welcome at 1, The Parade, Lower Richmond Road, Richmond, Surrey.
Tel: 878 0530.

WARWICKSHIRE

CARVELLS OF RUGBY LTD
3/7 BANK ST. RUGBY
TEL: 0788 65275/6
TEXAS TI-99/4A now only £99.95 unbeatable Texas offer.
ACORN ELECTRON coming in at £199, place your order now.
We also stock BBC B, Oric, CBM Spectrum + software books. Phone visit soon.

DO YOU HAVE ENOUGH STAFF TO COPE WITH LISTING YOUR SHOP IN THIS SECTION? FOR MORE CUSTOM LIST YOUR SHOP AND LOCATION. RING 01-437 1002 EXT 213.

W. MIDLANDS

COMPUTER CITY
Specialists in software for your Spectrum, VIC-20, ZX81, Oric-1 & Dragon 32.
Hardware also available
Find us at RAPID TV & Video Services, **49 Union Street, Wednesbury, W. Midlands. 021-556 9505.**

Please include my business details in the next available issue of Home Computing Weekly

Business Name: .....

Address: .....

.....

.....

Tel. No.: .....

Open Hrs: .....

Contact (Office Use Only): .....

Post To: H.C.W. (Shops & Dealers), 145 Charing Cross Rd., London WC2H 0EE.

£6 per single column cm or phone us for series discount.

YEP FOLKS — IT'S HERE

AVAILABLE NOW
Spectrum 48K
Dragon
Com. 64

CALIFORNIA

GOLD RUSH

HOWDE DO PARDNERS
This here's Prospector Jake, I sure am havin' one helluva time tryin' to peg ma claim with those damned Injuns a hootin' an a hollerin' all over this territory. Ma job gets harder as I move from one Gold Field to another. I know, that is me an' ma stubborn hornery ol' Mule here know of 24 rich an' I mean rich seams of pure Gold. All it needs to make this here ol' critter happy is that you help me peg every doggone last one of them claims.

Can YOU help Jake become rich, help him peg his claim, dodge the arrows, avoid the tomahawks, and plant the Dynamite in just the right place? . . . YOU CAN!!!

YIPPEE . . . Git yer Picks an' Shovels and join the CALIFORNIA GOLD RUSH . . . NOW

Amazing Arcade Action . . . Stunning Sound and Graphics
Available NOW for Commodore 64, Spectrum 48, and Dragon

£7.95 including P&P

SPECIAL OFFER ***SPECIAL OFFER*** ***SPECIAL OFFER***

Order CALIFORNIA GOLD RUSH before **November 11** and get a 10-game Cassette of terrific games . . . **FREE**

COMING SOON

LEAPIN' LANCELOT: Medieval Machine Magic to enthral you
GALACTIC SURVIVAL PAK: Every Astro-Traveller *must* have this!

ANiK

We always need Dynamic Dealers and Imaginative Writers

Please rush me CGR for (m c)

TOTAL SUM INCLUDED £
Please make cheques and POs payable to ANIK MICROSYSTEMS
30-KINGSCROFT COURT
BELLINGE. NORTHAMPTON

Name.....
Address.....
.....
.....

LASER SNAKER

£100 TO BE WON PLUS MANY OTHER PRIZES

If you are skilful enough to help Snaker on his deadly mission. To penetrate the hidden depths of the egg plantation and discover the secret symbol which is your key to success and fortune.

Scavenging the egg plantation Snaker grows by munching multi-coloured eggs. With powerful laser venom for protection Snaker must battle with vicious aggrenoids, kill poisonous viproids and avoid pulsating chrystoids. Then journey through the many mazes to reach the power stones of regeneration. How far can you take Snaker on his mission?

LASER SNAKER features challenging arcade action, 100% machine code, superb graphics, colour and sound, progressive difficulty levels, bonus lives, high score table, keyboard or Kempston Joystick, £100 to be won plus runner up prizes.

FULL COMPETITION DETAILS SUPPLIED WITH EACH CASSETTE
for any 48K ZX SPECTRUM

£5.95

£100 PRIZE TO BE WON

Dealer Enquiries Welcome

POPPY SOFT

The Close, Common Road, Headley, Newbury, Berkshire

NAME _____

ADDRESS _____

Please send me LASER SNAKER @ £5.95.
I enclose a cheque/P.O. payable to POPPY SOFT,
or debit my
Access No.

Signature _____